Data Structure & Algorithms

1. Stack is also called as
(a) Last in first out
(b) First in last out
(c) Last in last out
(d) First in first out

2. Which is the pointer associated with the availability list?
(a) FIRST (b) AVAIL
(c) TOP (d) REAR

3. Value of first linked list index is ______.
(a) 0 (b) 1
(c) -1 (d) 2

4. In linked lists there are no NULL links in
(a) Single linked list
(b) Linear doubly linked list
(c) Circular linked list
(d) Linked list

5. Each node in a linked list must contain at least ______.
(a) Three fields (b) Two fields
(c) Four fields (d) Five fields

6. The dummy header in linked list contain ______.
(a) First record of the actual data
(b) Last record of the actual data
(c) Pointer to the last record of the actual data
(d) Middle record of the actual data

7. In a linked list the ______ field contains the address of next element in the list.
(a) Link field
(b) Next element field
(c) Start field
(d) Info field

8. LLINK is the pointer pointing to the ______.
(a) Successor node
(b) Predecessor node
(c) Head node
(d) Last node

9. ______ refers to a linear collection of data items.
(a) List (b) Tree
(c) Graph (d) Edge

10. A run list is ______.
(a) Small batches of records from a file
(b) Number of elements having same value
(c) Number of records
(d) Number of files in external storage

11. A ______ indicates the end of the list.
(a) Guard (b) Sentinel
(c) End pointer (d) Last pointer

12. ______ is not the component of data structure.
(a) Operations
(b) Storage Structures
(c) Algorithms
(d) None of above

13. Which of the following is not the part of ADT description?
(a) Data
(b) Operations
(c) Both of the above
(d) None of the above

14. Inserting an item into the stack when stack is not full is called ______. Operation and deletion of item form the stack, when stack is not empty is called ______ operation.
(a) push, pop (b) pop, push
(c) insert, delete (d) delete, insert

15 _____ is a pile in which items are added at one end and removed from the other.
(a) Stack
(b) Queue
(c) List
(d) None of the above

16. _____ is very useful in situation when data have to stored and then retrieved in reverse order.
(a) Stack (b) Queue
(c) List (d) Link list

17. Which data structure allows deleting data elements from and inserting at rear?
(a) Stacks
b) Queues
(c) Dequeues
(d) Binary search tree

18. Which of the following data structure can't store the non-homogeneous data elements?
(a) Arrays (b) Records
(c) Pointers (d) Stacks

19. A _____ is a data structure that organizes data similar to a line in the supermarket, where the first one in line is the first one out.
(a) Queue linked list
(b) Stacks linked list
(c) Both of them
(d) Neither of them

20. Which of the following is non-liner data structure?
(a) Stacks (b) List
(c) Strings (d) Trees

21. Which if the following is/are the levels of implementation of data structure
(a) Abstract level
(b) Application level
(c) Implementation level
(d) All of the above

22. A binary search tree whose left subtree and right subtree differ in height by at most 1 unit is called _____.
(a) AVL tree
(b) Red-black tree
(c) Lemma tree
(d) None of the above

23. _____ level is where the model becomes compatible executable code
(a) Abstract level
(b) Application level
(c) Implementation level
(d) All of the above

24. Herder node is used as sentinel in _____.
(a) Graphs (b) Stacks
(c) Binary tree (d) Queues

25. Which data structure is used in breadth first search of a graph to hold nodes?
(a) Stack (b) queue
(c) Tree (d) Array.

26. Identify the data structure which allows deletions at both ends of the list but insertion at only one end.
(a) Input restricted dequeue
(b) Output restricted qequeue
(c) Priority queues
(d) Stack

27. Which of the following data structure is nonlinear type?
(a) Strings (b) Lists
(c) Stacks (d) Graph

28. Which of the following data structure is linear type?
(a) Graph (b) Trees
(c) Binary tree (d) Stack

29. To represent hierarchical relationship between elements, which data structure is suitable?
(a) Dequeue (b) Priority
(c) Tree (d) Graph

30 Which of the following is not the type of queue?
(a) Ordinary queue
(b) Single ended queue
(c) Circular queue
(d) Priority queue

31. Which of the following statement is false?
(a) Arrays are dense lists and static data structure.
(b) Data elements in linked list need not be stored in adjacent space in memory
(c) Pointers store the next data element of a list.
(d) Linked lists are collection of the nodes that contain information part and next pointer.

32. Which of the following data structure is non-linear type?
(a) Strings (b) Lists
(c) Stacks (d) Tree

33. Which of the following data structure is linear type?
(a) Array (b) Tree
(c) Graphs (d) Hierarchy

34. The logical or mathematical model of a particular organization of data is called a _____.
(a) Data structure
(b) Data arrangement
(c) Data configuration
(d) Data formation

35. The simplest type of data structure is _____.
(a) Multidimensional array
(b) Linear array
(c) Two dimensional array
(d) Three dimensional array

36. The property of binary tree is
(a) The first subset is called left subtree
(b) The second subtree is called right subtree
(c) The root cannot contain NULL
(d) The right subtree can be empty

37. Any node is the path from the root to the node is called
(a) Successor node
(b) Ancestor node
(c) Internal node
(d) None of the above

38. _____ is not an operation performed on linear list
a) Insertion b) Deletion c) Retrieval d) Traversal
(a) only a,b and c
(b) only a and b
(c) All of the above
(d) None of the above

39. Which is/are the application(s) of stack
(a) Function calls
(b) Large number Arithmetic
(c) Evaluation of arithmetic expressions
(d) All of the above

40. A _____ is an acyclic digraph, which has only one node with indegree 0, and other nodes have in-degree 1.
(a) Directed tree
(b) Undirected tree
(c) Dis-joint tree
(d) Direction oriented tree

41. _____ is a directed tree in which outdegree of each node is less than or equal to two.
(a) Unary tree (b) Binary tree
(c) Trinary tree (d) Both B and C

42. Which of the following data structures are indexed structures?
(a) Linear arrays (b) Linked lists
(c) Queue (d) Stack

43. Which of the following data structure store the homogeneous data elements?
(a) Arrays (b) Records
(c) Pointers (d) Lists

44. When new data are to be inserted into a data structure, but there is not available space; this situation is usually called ______.
(a) Underflow (b) overflow
(c) houseful (d) saturated

45. A data structure where elements can be added or removed at either end but not in the middle is called ______.
(a) linked lists (b) stacks
(c) queues (d) dequeue

46. Operations on a data structure may be ______.
(a) creation (b) destruction
(c) selection (d) all of the above

47. The way in which the data item or items are logically related defines ______.
(a) storage structure
(b) data structure
(c) data relationship
(d) data operation

48. A linear list in which each node has pointers to point to the predecessor and successors nodes is called as ______.
(a) Singly Linked List
(b) Circular Linked List
(c) Doubly Linked List
(d) Linear Linked List

49. A ______ is a linear list in which insertions and deletions are made to from either end of the structure.
(a) circular queue
(b) random of queue
(c) priority
(d) dequeue

50. In a priority queue, insertion and deletion takes place at ______.
(a) front, rear end
(b) only at rear end
(c) only at front end
(d) any position

51. The time complexity of quick sort is ______.
(a) O(n) (b) O(n2)
(c) O(n log n) (d) O(log n)

52. Which of the following is an application of stack?
(a) finding factorial
(b) tower of Hanoi
(c) infix to postfix conversion
(d) all of the above

53. The data structure which is one ended is ______.
(a) queue (b) stack
(c) tree (d) graph

54. A list which displays the relationship of adjacency between elements is said to be
(a) linear (b) non linear
(c) linked list (d) trees

55. ______ form of access is used to add and remove nodes from a queue.
(a) LIFO, Last In First Out
(b) FIFO, First In First Out
(c) Both a and b
(d) None of these

56. In liked representation of stack ______ holds the elements of the stack.
(a) INFO fields (b) TOP fields
(c) LINK fields (d) NULL fields

57. The term push and pop is related to
(a) Array (b) Lists
(c) Stacks (d) Trees

58. Which of the following are the operations applicable an primitive data structures?
(a) create (b) destroy
(c) update (d) all of the above

59. The use of pointers to refer elements of a data structure in which elements are logically adjacent is ______.
(a) pointe
(b) linked allocation
(c) stack
(d) queue

60. Linear arrays are also called ______.
(a) Straight line array
(b) One-dimensional array
(c) Vertical array
(d) Horizontal array

61. The retrieval of items in a stack is ______ operation.
(a) push (b) pop
(c) retrieval (d) access

62. Which is the pointer associated with the stack?
(a) FIRST (b) FRONT
(c) TOP (d) REAR

63. The elements are removal from a stack in ______ order.
(a) Reverse (b) Hierarchical
(c) Alternative (d) Sequential

64. The insertion operation in the stack is called ______.
(a) insert (b) push
(c) pop (d) top

65. ______ is the term used to insert an element into stack.
(a) Push (b) Pull
(c) Pop (d) Pump

66. When does Top value of stack change in insertion process?
(a) Before insertion
(b) After insertion
(c) At the time of insertion
(d) While checking overflow

67. A queue in which insertion and deletion takes places from any position is called ______.
(a) circular queue (b) random of queue
(c) priority (d) dequeue

68. Deletion in the linked stack takes place by deleting ______.
(a) Node pointed by the start process.
(b) End of the list
(c) Beginning of the list
(d) Middle of the list

69. Which of the following name does not relate to stacks?
(a) FIFO lists (b) LIFO list
(c) piles (d) push-down lists

70. The condition ______ indicate the queue is empty.
(a) Front=Null (b) Null=Front
(c) Front=Rear (d) Rear=Null

71. Which of the following is not the type of queue?
(a) Ordinary queue (b) Special queue
(c) Priority queue (d) Circular queue

72. The value of REAR is increased by 1 when ______.
(a) An element is deleted in a queue
(b) An element is traversed in a queue
(c) An element is added in a queue
(d) An element is merged in a queue

73. The operations that can be done in a circular queue is/are ______.
(a) Insert from the front end
(b) Delete from front end
(c) Display queue contents
(d) All of the above

74. The term dequeue is the contraction of the name ______.
(a) Double ended queue
(b) Double sided queue
(c) Double headed queue
(d) Double address queue

75. Arrays are best data structures ______.
(a) For relatively permanent collections of data.
(b) For the size of the structure and the data in the structure are constantly changing
(c) For both of above situation
(d) For none of the above

76. Which of the following data structures are indexed structures?
(a) Linear arrays (b) Linked lists
(c) Graphs (d) Trees

77. Stack follows the strategy of ______.
(a) LIFO (b) FIFO
(c) LRU (d) RANDOM

78. ______ is the term used to delete an element from the stack.
(a) Push (b) Pull
(c) Pop (d) Pump

79. Deletion operation is done using ______ in a queue.
(a) front (b) rear
(c) top (d) list

80. A pointer variable which contains the location at the top element of the stack is called ______.
(a) Top (b) Last
(c) Final (d) End

81 Which of the following is an application of stack?
(a) finding factorial
(b) tower of Hanoi
(c) infix to postfix
(d) all of the above

82. The queue in which the insertion takes place in the first position after of last element is a ______.
(a) priority (b) dequeue
(c) circular (d) linked

83. Before inserting into stack one must check the condition ______.
(a) Overflow
(b) Underflow
(c) Maximum elements
(d) Existing elements

84. The another name of dequeue is ______.
(a) divided queue
(b) distributed queue
(c) double ended queue
(d) design queue

85. Before deletion condition into stack ______ has to be checked.
(a) Overflow
(b) Underflow
(c) Maximum elements
(d) Existing elements

86. In dequeue, insertion and deletion takes place of ______.
(a) front, rear end
(b) only at rear end
(c) only at front end
(d) both the ends

87. Each node in a linked list has two pairs of ______ and ______.
(a) Link field and information field
(b) Link field and avail field
(c) Avail field and information field
(d) Address field and link field

88. A ______ does not keep track of address of every element in the list.
(a) Stack (b) String
(c) Linear array (d) Queue

89. When does top value of the stack changes?
(a) Before deletion
(b) While checking underflow
(c) At the time of deletion
(d) After deletion

90. Arrays are best data structures
(a) for relatively permanent collections of data
(b) for the size of the structure and the data in the structure are constantly changing
(c) for both of above situation
(d) for none of above situation

91 Which of the following data structure is not linear data structure?
(a) Arrays
(b) Linked lists
(c) Both of the above
(d) None of the above

92. The disadvantage in using a circular linked list is ______.
(a) It is possible to get into infinite loop.
(b) Last node points to first node.
(c) Time consuming
(d) Requires more memory space

93. ______ form of access is used to add remove nodes from a stack.
(a) LIFO
(b) FIFO
(c) Both A and B
(d) None of these

94. In the linked representation of the stack ______ behaves as the top pointer variable of stack.
(a) Stop pointer (b) Begin pointer
(c) Start pointer (d) Avail pointer

95. New nodes are added to the ______ of the queue.
(a) Front (b) Back
(c) Middle (d) Both A and B

96. In linked representation of stack the null pointer of the last node in the list signals ______.
(a) Beginning of the stack
(b) Bottom of the stack
(c) Middle of the stack
(d) In between some value

97. What happens when you push a new node onto a stack?
(a) The new node is placed at the front of the linked list
(b) The new node is placed at the back of the linked list
(c) The new node is placed at the middle of the linked list
(d) No Changes happens

98. A queue is a ______.
(a) FIFO (b) LIFO
(c) FILO (d) LOFI

99. Which of the following name does not relate to stacks?
(a) FIFO lists (b) LIFO lists
(c) Piles (d) push down lists

100. The various operations that can be performed on stacks is/are ______.
(a) Insert an item into the stack
(b) Delete an item from the stack
(c) Display the contents of the stack
(d) All of the above

101. ______ is a collection of elements such that each element has been assigned a processing priority.
(a) Priority queue
(b) Procedure queue
(c) Main queue
(d) Interrupt queue

102. The deletion operation in stack is called ______
(a) Insert (b) pus
(c) Pop (d) top

103. Link fields holds pointers to the _____ element in the linked representation of stack.
(a) Neighboring (b) Last
(c) First (d) Middle

104. The pointer associated with the stack is _____.
(a) front (b) rear
(c) top (d) link

105. Reversing a great deal of space for each stack in memory will _____.
(a) Decrease the numbers of times overflow may occur
(b) Increase the numbers of times overflow may occur
(c) Increase the number of times underflow may occur
(d) Increase the number of times underflow may occur.

106. The operation of processing each element in the list is known as _____.
(a) sorting (b) merging
(c) inserting (d) traversal

107. Other name for directed graph is _____.
(a) Direct graph (b) Digraph
(c) Dir-graph (d) Digraph

108. Binary trees with threads are called as _____.
(a) Threaded trees
(b) Pointer trees
(c) Special trees
(d) Special pointer trees

109. Graph G is _____ if for any pair u, v of nodes in G there is a path from u to v or path from v to u.
(a) Literally connected
(b) Widely Connected
(c) Unliterally connected
(d) Literally connected

110. In Binary trees nodes with no successor are called _____.
(a) End nodes
(b) Terminal nodes
(c) Final nodes
(d) Last nodes

111. A connected graph T without any cycles is called _____.
(a) free graph
(b) no cycle graph
(c) non cycle graph
(d) circular graph

112. Trees are said _____ if they are similar and have same contents at corresponding nodes.
(a) Duplicate (b) Carbon copy
(c) Replica (d) Copies

113. A connected graph T without any cycles is called a _____.
(a) A tree graph (b) Free tree
(c) A tree d (d) All of the above

114. Every node N in a binary tree T except the root has a unique parent called the _____ of N.
(a) Antecedents (b) Predecessor
(c) Forerunner (d) Precursor

115. In a graph if E=(u,v) means _____.
(a) u is adjacent to v but v is not adjacent to u
(b) e begins at u and ends at v
(c) u is processor and v is successor
(d) both b and c

116. Sequential representation of binary tree uses _____.
(a) Array with pointers
(b) Single linear array
(c) Two dimensional arrays
(d) Three dimensional arrays

117. In a graph if e=[u,v], Then u and v are called _____.
(a) End points of e
(b) Adjacent nodes
(c) Neighbors
(d) All of the above

118. TREE[1]=NULL indicates tree is _____.
(a) Overflow (b) Underflow
(c) Empty (d) Full

119. A binary tree whose every node has either zero or two children is called _____.
(a) complete binary tree
(b) binary search tree
(c) extended binary tree
(d) data structure

120. Linked representation of binary tree needs _____ parallel arrays.
(a) 4 (b) 2
(c) 3 (d) 5

121. The depth of complete binary tree is given by _____.
(a) Dn = n log2n (b) Dn= n log2n+1
(c) Dn = log2n (d) Dn = log2n+1

122. In a 2-tree, nodes with 0 children are called _____.
(a) Exterior node (b) Outside node
(c) Outer node (d) External node

123. Which indicates pre-order traversal?
(a) Left sub-tree, Right sub-tree and root
(b) Right sub-tree, Left sub-tree and root
(c) Root, Left sub-tree, Right sub-tree
(d) Right sub-tree, root, Left sub-tree

124. In an extended-binary tree nodes with 2 children are called _____.
(a) Interior node (b) Domestic node
(c) Internal node (d) Inner node

125. A terminal node in a binary tree is called _____.
(a) Root (b) Leaf
(c) Child (d) Branch

126. The post order traversal of binary tree is DEBFC(a) Find out the pre order traversal.
(a) ABFCDE (b) ADBFEC
(c) ABDECF (d) ABDCEF

127. While converting binary tree into extended binary tree, all the original nodes in binary tree are _____.
(a) Internal nodes on extended tree
(b) External nodes on extended tree
(c) Vanished on extended tree
(d) Intermediate nodes on extended tree

128. The in-order traversal of tree will yield a sorted listing of elements of tree in _____.
(a) binary trees
(b) binary search trees
(c) heaps
(d) binary heaps

129. In a binary tree, certain null entries are replaced by special pointers which point to nodes higher in the tree for efficiency. These special pointers are called _____.
(a) Leaf (b) Branch
(c) Path (d) Thread

130. In a head tree _____.
(a) values in a node is greater than every value every value in left sub tree and smaller than right sub tree.
(b) values in a node is greater than every value in children of it.
(c) conditions.
(d) terms.

131. The in order traversal of tree will yield a sorted listing of elements of tree in _____.
(a) Binary trees
(b) Binary search trees
(c) Merging
(d) AVL Trees

132. In a graph if e=(u,v) means _____.
(a) u is adjacent to v but v is not adjacent to u.
(b) e begins at u and ends at v
(c) u is node and v is an edge.
(d) both u and v are edges.

133. A binary tree whose every node has either zero or two children is called _____.
(a) Complete binary tree
(b) Binary Search tree
(c) Extended binary tree
(d) E2 tree

134. If every node u in G is adjacent to every other node v in G,A graph is said to be _____.
(a) isolated
(b) complete
(c) finite
(d) strongly connected.

135. The post order traversal of a binary tree is DEBFCA. Find out the pre order Traversal.
(a) ABFCDE (b) ADBFEC
(c) ABDECF (d) ABDCEF

136. In a graph if e=[u,v], then u and v are called
(a) endpoints of e
(b) adjacent nodes
(c) neighbors
(d) all of the above

137. In-order traversing a tree resulted E A C K F H D B G; the pre-order traversal would return.
(a) FAEKCDBHG (b) FAEKCDHGB
(c) EAFKHDCBG (d) FEAKDCHBG

138. A connected graph T without any cycles is called.
(a) a tree graph (b) free tree
(c) a tree (d) All of above

139. In linked representation of Binary trees LEFT[k] contains the _____ of at the node N, where k is the location.
(a) Data
(b) Location and left child
(c) Right child address
(d) Null value

140. If every node u in G adjacent to every other node v in G, A graph is said to be
(a) isolated
(b) complete
(c) finite
(d) strongly connected

141. Three standards ways of traversing a binary tree T with root R _____.
(a) Prefix, infix, postfix
(b) Pre-process, in-process, post-process
(c) Pre-traversal, in-traversal, post-traversal
(d) Pre-order, in-order, post-order

142. A graph is said to be _____ if every node u in G is adjacent to every other node v in G.
(a) Absolute (b) Entire
(c) Inclusive (d) Complete

143. In threaded binary tree _____ points to higher nodes in tree.
(a) Info (b) Root
(c) Threads (d) Child

144. A graph is said to be _____ if its edges are assigned data.
(a) Tagged (b) Marked
(c) Labeled (d) Sticked

145. If node N is a terminal node in a binary tree then it's _____.
(a) Right tree is empty
(b) Left tree is empty
(c) Both left & right sub trees are empty
(d) Root node is empty

146. Linked lists are best suited _____.
(a) for relatively permanent collections of data.
(b) for the size of the structure and the data in the structure are constantly changing.
(c) data structure
(d) for none of above situation

147. The operation of processing each element in the list is known as _____.
(a) sorting (b) merging
(c) inserting (d) traversal

148. The situation when in a linked list START=NULL is _____.
(a) Underflow (b) Overflow
(c) Houseful (d) Saturated

149. Each node in singly linked list has _____ fields.
(a) 2 (b) 3
(c) 1 (d) 4

150. Which of the following is two way lists?
(a) Grounded header list
(b) Circular header list
(c) Linked list with header and trailer nodes
(d) List traversed in two directions

151. A _____ is a linear list in which insertions and deletions are made to from either end of the structure.
(a) circular queue
(b) random of queue
(c) priority
(d) dequeue

152. Indexing the _____ element in the list is not possible in linked lists.
(a) middle
(b) first
(c) last
(d) any where in between

153. A linear list in which the pointer points only to the successive node is _____.
(a) singly linked list
(b) circular linked list
(c) doubly linked list
(d) none of the above

154. _____ may take place only when there is some minimum amount (or) no space left in free storage list.
(a) Memory management
(b) Garbage collection
(c) Recycle bin
(d) Memory management

155. A linear list in which the last node points to the first node is _____.
(a) singly linked list
(b) circular linked list
(c) doubly linked list
(d) none of the above

156. To insert a new node in linked list free node will be available in _____.
(a) Available list
(b) Avail list
(c) Free node list
(d) Memory space list

157. A singly linked list is also called as _____.
(a) linked list (b) one way chain
(c) two way chain (d) right link

158. A _____ list is a header list where the node points back to the header node.
(a) Circular header
(b) Grounded header
(c) Two way header
(d) One way header

159. A doubly linked list has _____ pointers with each node.
(a) 0 (b) 1
(c) 2 (d) 3

160. Header linked lists are frequently used for maintaining _____ in memory.
(a) Polynomials
(b) Binomial
(c) Trinomial
(d) Quadratic equation

161. The pointer that points to the first node in the list is _____.
(a) FIRST (b) AVAIL
(c) TOP (d) REAR

162. Two-way list may be maintained in memory by means of _____.
(a) Queues
(b) Linear arrays
(c) Nonlinear arrays
(d) Stacks

163. A doubly linked list is also called as _____.
(a) linked list (b) one way chain
(c) two way chain (d) right link

164. The list that requires two pointer variables FIRST and LAST is called _____.
(a) Circular list (b) Header list
(c) One way list (d) Two way list

165. If the availability list is null, then the condition is said to be _____.
(a) nil block
(b) availability list underflow
(c) availability list overflow
(d) memory loss

166. The list which has its own pointer is called _____.
(a) pointer list (b) self pointer
(c) free pool (d) own pointer

167. If the number of records to be sorted is small, then _____ sorting can be efficient.
(a) Merge (b) Heap
(c) Selection (d) Bubble

168. The complexity of sorting algorithm measures the _____ as a function of the number n of items to be sorter.
(a) average time
(b) running time
(c) average-case complexity
(d) case-complexity

169. Which of the following is not a limitation of binary search algorithm?
(a) must use a sorted array
(b) requirement of sorted array is expensive when a lot of insertion and deletions are needed
(c) there must be a mechanism to access middle element directly
(d) binary search algorithm is not efficient when the data elements more than 1500.

170. The Average case occurs in linear search algorithm _____.
(a) when item is somewhere in the middle of the array
(b) when item is not the array at all
(c) when item is the last element in the array
(d) Item is the last element in the array or item is not there at all

171. Binary search algorithm cannot be applied to ...
(a) sorted linked list
(b) sorted binary trees
(c) sorted linear array
(d) pointer array

172. Complexity of linear search algorithm is _____.
(a) O(n) (b) O(logn)
(c) O(n2) (d) O(n logn)

173. Which of the following is two way lists?
(a) Grounded header list
(b) Circular header list
(c) Linked list with header and trailer nodes
(d) None of the above

174. A _____ is a header list where the last node contains the null pointer.
(a) grounded header list
(b) bottom header list
(c) down header list
(d) dropped header list

175. RLINK is the pointer pointing to the _____.
(a) successor node
(b) predecessor node
(c) head node
(d) last node

176. A _____ is a header list where the last node points back to the header node.
(a) rounded header list
(b) circular header list
(c) common header list
(d) forward header list

177. In a linked list, insertion can be done as _____.
(a) beginning (b) end
(c) middle (d) all of the above

178. In a two-way lists each node is divided into _____ parts.
(a) 1 (b) 2
(c) 3 (d) 4

179. The disadvantage in using a circular linked list is _____.
(a) it is possible to get into infinite loop
(b) last node points to fist node.
(c) time consuming
(d) requires more memory space.

180. Which of the following conditions checks available free space in avail list?
(a) Avail=Null
(b) Null=Avail
(c) Avail=Max stack
(d) Avail=Top

181. A linear list in which each node has point to the predecessor and successors nodes is called _____.
(a) singly linked list
(b) circular linked list
(c) doubly linked list
(d) linear linked list

182. Finding the location of a given item in a collection of items is called _____
(a) Discovering (b) Finding
(c) Searching (d) Mining

183. Which of the following is an external sorting?
(a) Insertion Sort (b) Bubble Sort
(c) Merge Sort (d) Tree Sort

184. Very slow way of sorting is _____.
(a) Insertion sort (b) Heap sort
(c) Bubble sort (d) Quick sort

185. Which of the following is an internal sorting?
(a) Tape Sort
(b) 2-way Merge Sort
(c) Merge Sort
(d) Tree Sort

186. Sorting a file F usually refers to sorting F with respect to a particular key called _____.
(a) Basic key (b) Primary key
(c) Starting key (d) Index key

187. The time complexity of quick sort is ______.
(a) O(n) (b) O(logn)
(c) O(n2) (d) O(n logn)

188. Selection sort first finds the ______ element in the list and put it in the first position.
(a) Middle element
(b) Largest element
(c) Last element
(d) Smallest element

189. Quick sort is also known as ______.
(a) merge sort
(b) tree sort
(c) shell sort
(d) partition and exchange sort

190. The operation that combines the element is of A and B in a single sorted list C with n=r+s element is called ______.
(a) Inserting (b) Mixing
(c) Merging (d) Sharing

191. A tree sort is also known as ______ sort.
(a) quick (b) shell
(c) heap (d) selection

192. ______ sorting is good to use when alphabetizing large list of names.
(a) Merge (b) Heap
(c) Radix (d) Bubble

193. The easiest sorting is ______.
(a) quick sort (b) shell sort
(c) heap sort (d) selection sort

194. Which of the following sorting algorithm is of divide and conquer type?
(a) Bubble sort (b) Insertion sort
(c) Quick sort (d) Merge sort

195. Merging k sorted tables into a single sorted table is called ______.
(a) k way merging (b) k th merge
(c) k+1 merge (d) k-1 merge

196. The function used to modify the way of sorting the keys of records is called ______.
(a) Indexing function
(b) Hash function
(c) Addressing function
(d) All of the above

197. If the number of record to be sorted large and the key is short, then ______ sorting can be efficient.
(a) Merge (b) Heap
(c) Radix (d) Bubble

198. The total number of comparisons in a bubble sort is ______.
(a) O(n logn) (b) O(2n)
(c) O(n2) (d) O(n)

199. If the number of record to be sorted large and the key is long, then ______ sorting can be efficient.
(a) Merge (b) Heap
(c) Quick (d) Bubble

200. The time complexity of heap sort is ______.
(a) O(n) (b) O(logn)
(c) O(n2) (d) O(n logn)

Answers

1. a	2. d	3. a	4. c	5. b	6. a	7. a	8. b	9. a
10. a	11. b	12. d	13. d	14. a	15. b	16. a	17. b	18. a
19. a	20. d	21. d	22. a	23. c	24. c	25. b	26. a	27. d
28. d	29. c	30. b	31. c	32. d	33. a	34. a	35. b	36. d
37. b	38. d	39. d	40. a	41. b	42. a	43. b	44. b	45. d
46. d	47. b	48. c	49. d	50. d	51. c	52. d	53. b	54. a
55. b	56. a	57. c	58. d	59. b	60. b	61. b	62. a	63. a
64. b	65. a	66. a	67. c	68. a	69. a	70. a	71. b	72. c
73. d	74. a	75. b	76. a	77. a	78. c	79. a	80. a	81. d
82. c	83. a	84. c	85. b	86. d	87. a	88. c	89. d	90. a
91. d	92.	93. a	94. c	95. b	96. b	97. a	98. a	99. a
100. d	101. a	102. c	103. a	104. c	105. a	106. d	107. d	108. a
109. c	110. b	111. a	112. d	113. d	114. b	115. d	116. a	117. d
118. c	119. c	120. c	121. d	122. d	123. c	124. c	125. b	126. c
127. a	128. b	129. d	130. b	131. b	132. c	133. b	134. b	135. c
136. d	137. b	138. a	139. a	140. b	141. d	142. d	143. c	144. c
145. c	146. d	147. b	148. a	149. a	150. d	151. d	152. a	153. a
154. b	155. b	156. b	157. b	158. a	159. c	160. a	161. a	162. b
163. c	164. d	165. b	166. c	167. c	168. b	169. d	170. a	171. d
172. a	173. d	174. a	175. a	176. b	177. d	178. c	179. a	180. a
181. c	182. c	183. c	184. a	185. d	186. b	187. d	188. d	189. d
190. c	191. c	192. c	193. d	194. c	195. a	196. b	197. c	198. a
199. c	200. d							

Operating System

1. Which of the following is not the function of Micro kernel?
(a) File management
(b) Low-level memory management
(c) Inter-process communication
(d) I/O interrupts management

2. A direct method of deadlock prevention is to prevent the occurrences of ______.
(a) Mutual exclusion
(b) Hold and wait
(c) Circular waits
(d) No preemption

3. The methods or algorithms which are used to increase the performance of disk storage sub-system is called ______.
(a) Disk performing
(b) Disk scheduling
(c) Disk storing
(d) Disk extending

4. ______ is the time required to move the disk arm to the required track.
(a) Seek time
(b) Rotational delay
(c) Latency time
(d) Access time

5. The ______ policy restricts scanning to one direction only.
(a) SCAN (b) C-SCAN
(c) N-Step SCAN (d) Both A and B

6. Multiprocessing ______.
(a) makes the operating system simpler
(b) allows multiple processes to run simultaneously
(c) is completely understood by all major computer vendors
(d) allows the same computer to have the multiple processors

7. In ______ condition, two or more processes must form a circular chain in which each process is waiting for a resource that is held by the next member of the chain.
(a) Mutual exclusion
(b) Hold and wait
(c) No preemption
(d) Circular wait

8. Which of the following is not advantage of multiprogramming?
(a) Increased throughput
(b) Shorter response time
(c) Decreased operating system overhead
(d) Ability to assign priorities of jobs

9. Which is not a state of the process?
(a) Blocked (b) Running
(c) Ready (d) Privileged

10. An optimal scheduling algorithm in terms of minimizing the average waiting time of a given set of process is ______.
(a) FCFS scheduling
(b) Round robin scheduling algorithm
(c) Shortest job first scheduling algorithm
(d) Priority scheduling algorithm

11. The hardware mechanism that enables a device to notify the CPU is called ______.
(a) polling
(b) interrupt
(c) system call
(d) none of the above

12. In the running state ______.
(a) only the process which has control of the processor is fond
(b) all the process waiting for I/O to be completed are found
(c) all the processes waiting for the processor are found
(d) none of the above

13. ______ policy selects the disk I/O request that requires the least movement of the disk arm from its current position.
(a) FSCAN (b) SSTF
(c) SCAN (d) C-SCAN

14. ______ refers to the ability of an operating system to support multiple threads of execution with a single process.
(a) Multithreading (b) Multiprocessing
(c) Multiexecuting (d) Bi-threading

15. State whether the following statement is true.
i) It takes less time to terminate a thread than a process.
ii) Threads enhance efficiency in communication between different executing programs.
(a) i-True, ii-False
(b) i-True, ii-True
(c) i-False, ii-True
(d) i-False, ii-False

16. ______ is a special type of programming language used to provide instructions to the monitor simple batch processing schema.
(a) Job control language (JCL)
(b) Processing control language (PCL)
(c) Batch control language (BCL)
(d) Monitor control language (MCL)

17. ______ refers to a situation in which a process is ready to execute but is continuously denied access to a processor in deference to other processes.
(a) Synchronization
(b) Mutual Exclusion
(c) Dead lock
(d) Starvation

18. A ______ is a program that can infect other programs by modifying them, the modification includes a copy of the virus program, which can go on to infect other programs.
(a) Worm (b) Virus
(c) Zombie (d) Trap doors

19. The first batch operating system was developed in the ______ by General Motors for use on an IBM 70A
(a) mid 1940's (b) mid 1950's
(c) mid 1960's (d) mid 1970's

20. Process is ______.
(a) A program in execution
(b) An instance of a program running on a computer.
(c) The entity that can be assigned to and executed
(d) All of the above.

21. ______ is a facility that allows programmers to address memory from a logical point of view, without regard to the main memory, physically available.
(a) Visual memory
(b) Real memory
(c) Virtual memory
(d) Secondary memory

22. ______ is a large kernel, including scheduling file system, networking, device drivers, memory management and more.
(a) Monolithic kernel
(b) Micro kernel
(c) Macro kernel
(d) Mini kernel

23. A ______ architecture assigns only a few essential functions to the kernel, including address spaces, Inter process communication (IP(c) and basic scheduling.
(a) Monolithic kernel
(b) Micro kernel
(c) Macro kernel
(d) Mini kernel

24. Which of the following is not the approach to dealing with deadlock?
(a) Prevention (b) Avoidance
(c) Detection (d) Deletion

25. Which of the following are the states of a five state process model?
i) Running ii) Ready
iii) New iv) Exit
v) Destroy
(a) i, ii, iii and v only
(b) i, ii, iv and v only
(c) i, ii, iii, and iv only
(d) All i, ii, iii, iv and v

26. State which statement is true for Suspended process?
i) The process is not immediately available for execution.
ii) The process may be removed from suspended state automatically without removal order.
(a) i only (b) ii only
(c) i and ii only (d) None

27. Following is/are the reasons for process suspension.
(a) Swapping parent process
(b) Inter request
(c) Timing
(d) All of the above

28. The different types of tables maintained by the operating system are ______.
(a) memory, logical , I/O file
(b) memory, I/O, file, physical
(c) memory, I/O, file, process
(d) memory, logical, I/O, physical

29. Which of the following information not included in memory table?
(a) The allocation of main memory to process.
(b) The allocation of secondary memory to process
(c) Any information needed to manage virtual memory
(d) Any information about the existence of file

30. In computer security, ______ means that computer system assets can be modified only by authorized parities.
(a) Confidentiality (b) Integrity
(c) Availability (d) Authenticity

31. In computer security, ______ means that the information in a computer system only be accessible for reading by authorized parities.
(a) Confidentiality (b) Integrity
(c) Availability (d) Authenticity

32. Which of the following is independent malicious program that need not any host program?
(a) Trap doors (b) Trojan horse
(c) Virus (d) Worm

33 The ______ is code that recognizes some special sequence of input or is triggered by being run from a certain user ID of by unlikely sequence of events.
(a) Trap doors (b) Trojan horse
(c) Logic Bomb (d) Virus

34. ______ also known as monitor mode.
(a) User mode
(b) System mode
(c) Unprivileged mode
(d) Process mode

35. Process Management function of an operating system kernel includes.
(a) Process creation and termination.
(b) Process scheduling and dispatching
(c) Process switching
(d) All of the above

36. The typical elements of process image are ______.
i) User data ii) System Data
iii) User program iv) System stack
(a) i, iii and iv only
(b) i, ii, and iv only
(c) ii, iii, and iv only
(d) All i, ii, iii, and iv

37. Match the following mechanisms for interrupting the execution of a process and their uses.
i) Interrupt (a) Call to an operating system function
ii) Trap (b) Reaction to an asynchronous external event
iii) Supervisor Call (c) Handling of an error or an exception condition
(a) i-a, ii-b, iii-c (b) i-c, ii-a, iii-b
(c) i-b, ii-c, iii-a (d) i-a, ii-c, iii-b

38. The unit of dispatching is usually referred to as a ______.
(a) Thread
(b) Lightweight process
(c) Process
(d) Both A and B

39. ______ is an example of an operating system that support single user process and single thread.
(a) UNIX
(b) MS-DOS
(c) OS/2
(d) Windows 2000

40. State true or false.
i) Unix, support multiple user process but only support one thread per process.
ii) A java run time environment is an example of a system of one process with multiple threads.
(a) True, False (b) True, True
(c) False, True (d) False, False

41. ______ are very effective because a mode switch is not required to switch from one thread to another.
(a) Kernel-level threads
(b) User-level threads
(c) Alterable threads
(d) Application level threads

42. ______ is a condition in which there is a set of concurrent processes, only one of which is able to access a given resource or perform a given function at any time.
(a) Mutual Exclusion
(b) Busy Waiting
(c) Deadlock
(d) Starvation

43. ______ Techniques can be used to resolve conflicts, such as competition for resources, and to synchronize processes so that they can cooperate.
(a) Mutual Exclusion
(b) Busy Waiting
(c) Deadlock
(d) Starvation

44 ______ Can be defined as the permanent blocking of a set of processed that either complete for system resources or communicate with each other.
(a) Deadlock
(b) Permanent lock
(c) Starvation
(d) Mutual exclusion

45. The following conditions of policy must be present for a deadlock to be possible.
i) Mutual exclusion ii) Hold and wait
iii) No preemption iv) Circular wait
(a) i, ii and iii only
(b) ii, iii and iv only
(c) i, iii and iv only
(d) All i, ii, iii and iv

46. A direct method of deadlock prevention is to prevent the occurrence of ______.
(a) Mutual exclusion
(b) Hold and wait
(c) Circular waits
(d) No preemption

47. The ______ is code embedded in some legitimate program that is set to "explode" when certain conditions are met.
(a) Trap doors (b) Trojan horse
(c) Logic Bomb (d) Virus

48. Which of the following malicious program do not replicate automatically?
(a) Trojan Horse (b) Virus
(c) Worm (d) Zombie

49. ______ programs can be used to accomplish functions indirectly that an unauthorized user could not accomplish directly.
(a) Zombie (b) Worm
(c) Trojan Horses (d) Logic Bomb

50. State whether true or false.
i) Multithreading is useful for application that perform a number of essentially independent tasks that do not be serialize(d)
ii) An example of multithreading is a database server that listens for and process numerous client request.
(a) i-True, ii-False
(b) i-True, ii-True
(c) i-False, ii-True
(d) i-False, ii-False

51. With ______ only one process can execute at a time; meanwhile all other process are waiting for the processer. With ______ more than one process can be running simultaneously each on a different processer.
(a) Multiprocessing, Multiprogramming
(b) Multiprogramming, Uniprocessing
(c) Multiprogramming, Multiprocessing
(d) Uniprogramming, Multiprocessing

52. The two central themes of modern operating system are ______.
(a) Multiprogramming and Distributed processing
(b) Multiprogramming and Central Processing
(c) Single Programming and Distributed processing
(d) None of above

53. ______ refers to the ability of multiple process (or threads) to share code, resources or data in such a way that only one process has access to shared object at a time.
(a) Synchronization
(b) Mutual Exclusion
(c) Dead lock
(d) Starvation

54. _____ is the ability of multiple process to co-ordinate their activities by exchange of information
(a) Synchronization
(b) Mutual Exclusion
(c) Dead lock
(d) Starvation

55. State whether true of false.
i) A worm mails a copy of itself to other systems.
ii) A worm executes a copy of itself on another system.
(a) True, False (b) False, True
(c) True, True (d) False, False

56. Which of the following buffering strategies are used in interprocess communication?
(a) null pointer
(b) single message buffer
(c) multiple message buffer
(d) all of the above

57. The process of splitting of data into equal size partitions over multiple disks is known as _____.
(a) data stripping (b) array of disks
(c) RAID (d) SCAN

58. Pipes allow transfer of data between processor in a _____ manner.
(a) last in first out
(b) shortest job first
(c) multilevel queue
(d) first in first out

59. The process of storing extra or duplicate information used for rebuilding the lost information in event of disks failure is known as _____.
(a) stripping (b) redundancy
(c) disk array (d) RAID

60. A thread that is to be canceled is often referred to as the _____.
(a) target thread
(b) thread cancellation
(c) asynchronous cancellation
(d) defined cancellation

61. _____ ensures the every message sent to a group of receivers will be delivered to either all of them or none of them.
(a) Ordered delivery
(b) Atomicity
(c) Survivability
(d) Reliability

62. An arrangement of record in a sequence in which they arrive is known as a _____.
(a) pile (b) file
(c) disk (d) directory

63. State true of false.
i) With paging, each process is divided into relatively small, fixed-size pages.
ii) Segmentation provides for the use of pieces of varying size.
(a) True, False (b) True, True
(c) False, True (d) False, False

64. _____ Involves treating main memory as a resource to be allocated to and shared among a number of active processes.
(a) Partition management
(b) Memory management
(c) Disk management
(d) All of the above

65. A process that execute only in main memory is referred to as _____ and that allocated in disk is referred to a _____.
(a) virtual memory, true memory
(b) virtual memory, real memory
(c) real memory, virtual memory
(d) imaginary memory, real memory

66. In process scheduling, _____ determines when new processes are admitted to the system.
(a) long term scheduling
(b) medium term scheduling
(c) short term scheduling
(d) none of the above

67. Round robin scheduling is essentially the preemptive version of _____.
(a) first in first out
(b) shortest job first
(c) shortest remaining
(d) longest time first

68. The process that are residing in the main memory and are waiting to execute are kept on a list called the _____.
(a) job queue (b) ready queue
(c) wait queue (d) device queue

69. Which of the following describes the ability of an OS to support multiple, concurrent paths of execution within a single process?
(a) Multithreading
(b) Multiprocessing
(c) Multitasking
(d) Multiprogramming

70. Virtual memory is
(a) an extremely large main memory
(b) an extremely large secondary memory
(c) an illusion of extremely large main memory
(d) a type of memory used in super computers

71. A thread is a _____ process.
(a) heavy weight (b) multi
(c) inter thread (d) light weight

72. A small program which loads OS into the memory is called as _____.
(a) ROM
(b) Bootstrap loader
(c) BIOS
(d) RAM

73. Virtual memory is _____.
(a) Simple to implement
(b) Used by all major commercial OS
(c) Less efficient memory utilization
(d) Less effective

74. A special purpose register that is set to the highest address occupied by the OS code is _____.
(a) fence register
(b) general purpose register
(c) protection register
(d) control register

75. As OS program module that selects the next job to be admitted for execution is called as _____.
(a) scheduler (b) compiler
(c) throughput (d) dispatcher

76. Multiprogramming systems _____.
(a) are easier to develop than single programming systems.
(b) execute each job faster
(c) execute more jobs in the same time.
(d) are used only on large main frame computers

77. SSTF stands for _____.
(a) Small seek Time First
(b) Simple Seek Time First
(c) Shortest Seek Time First
(d) Synchronous Seek Time First

78. The program is known as _____ which interacts with the inner part of called kernel.
(a) compiler (b) device driver
(c) protocol (d) shell

79. Semaphore can be used for solving _____.
(a) wait & signal
(b) deadlock
(c) synchronization
(d) priority

80. The number of processes completed per unit time is known as _____.
(a) output (b) throughput
(c) efficiency (d) capacity

81. On what principle does Distributed OS work?
(a) File foundation
(b) Single system image
(c) Multi system image
(d) Networking image

82. The simplest way of deadlock is to _____.
(a) preempt a resource
(b) rollback
(c) kill one of the processes
(d) lock one of the processes

83. Throughput of a system is
(a) Number of programs processed by it per unit time
(b) Number of times the program is invoked by the system
(c) Number of requests made to a program by the system
(d) None of the above

84. Which of the following is not OS layer?
(a) Kernel
(b) Shell
(c) Application Programs
(d) Critical Section

85. Generally we have user level threads and _____.
(a) Programmer level thread
(b) kernel level thread
(c) program level thread
(d) process level thread

86. To ensure that the _____ condition never occurs in the system, we must guarantee that, whenever a process requests a resource, it does not have any other resource.
(a) mutual exclusion
(b) no-preemption
(c) circular waits
(d) hold and wait

87. Resource locking _____.
(a) allows multiple tasks to simultaneously use resource
(b) forces only on task to use any resource at any time
(c) can easily cause a dead lock condition
(d) in not used for disk drives

88. A program responsible for assigning the CPU to the process that has been selected by the short term scheduler is known as _____.
(a) scheduler (b) dispatcher
(c) debugger (d) compiler

89. The _____ instruct Kernel to do various operations of the calling program and exchange data between the Kernel at the program.
(a) shell (b) editors
(c) system calls (d) commands

90. The technique, for sharing the time of a computer among several jobs, which switches jobs so rapidly such that each job appears to have the computer to itself, is called _____.
(a) time sharing (b) time out
(c) time domain (d) multitasking

91. For batch and payroll applications which of the following file organization is better _____.
(a) random file (b) sequential file
(c) indexed file (d) hashed file

92. The process is _____.
(a) an instance of a program in execution
(b) a program only
(c) a processor state
(d) the kernel state

93. The mechanism that brings a page into memory only when it is needed is called _____.
(a) segmentation
(b) fragmentation
(c) demand paging
(d) page replacement

94. The two paradigms if IPC are _____ and _____.
(a) call, reply
(b) shared memory, message passing
(c) send, receive
(d) call by value, call by reference

95. A program is passive while a process is _____.
(a) inactive (b) spontaneous
(c) active (d) impulse

96. FIFO scheduling is _____.
(a) preemptive scheduling
(b) non preemptive scheduling
(c) deadline scheduling
(d) fair share scheduling

97. _____ ensures that once transaction completes successively, the results of the operations become permanent.
(a) serializability (b) synchronizability
(c) atomicity (d) durability

98. A process is created and is initially put in the _____.
(a) ready queue (b) device queue
(c) i/o queue (d) waiting queue

99. Which directory implementation is set in most of the Operating System?
(a) single level directory structure
(b) two level directory structure
(c) tree directory structure
(d) acyclic directory structure

100. Isolation property is also known as _____.
(a) Performance (b) Serializability
(c) Durability (d) Atomicity

101. A thread is a _____.
(a) task
(b) process
(c) program
(d) light weight process

102. The interval from the fine submission of a process to the time of completion is the _____
(a) waiting time
(b) blocked time
(c) turnaround time
(d) response time

103. The term "Operating System" means _____.
(a) a set of programs which controls computer working
(b) the way a computer operator works
(c) conversion of high-level language in to machine level language
(d) the way a floppy disk drive operates

104. In process scheduling, _____ determines which ready process will be executed next by processor.
(a) long term scheduling
(b) medium term scheduling
(c) short term scheduling
(d) none of the above

105. The sum of the seek time, and the rotational delay is called the _____.
(a) reached time (b) access time
(c) arrived time (d) common time

106. The _____ policy segments the disks request queue into sub queues of the length N.
(a) SCAN (b) C-SCAN
(c) N-Step SCAN (d) FSCAN

107. The ______ determines when a page should be brought into main memory.
(a) Fetch policy
(b) Placement policy
(c) Replacement policy
(d) Resident set management

108. With ______ a page is written out to secondary memory only when it has been selected for replacement.
(a) pre-cleaning
(b) demand cleaning
(c) required cleaning
(d) fast cleaning

109. Operating System means ______.
(a) a set of programs which controls computer working.
(b) a way of computer drives works
(c) a set of devices and programs
(d) All of the above

110. The basic types of OS are ______.
(a) batch and time sharing
(b) sequential and real time
(c) direct and interactive
(d) batch and interactive

111 Name the scheduler that selects among the processes that are ready to execute and allocates the CPU to one of them.
(a) Long term scheduler
(b) Medium term scheduler
(c) Job scheduler
(d) Short term scheduler

112 Failure during inter-process communication may be due to ______.
(a) loss of request transfer unit
(b) single datagram messages
(c) multi datagram messages
(d) message passing

113. The process of direct mapping by using some faster algorithms is called as ______.
(a) hashing (b) searching
(c) sorting (d) indexing

114. Name the system in which the processors do not share memory and each processor that its own local memory.
(a) Tightly coupled system
(b) Parallel processing system
(c) Loosely coupled system
(d) Batch processing system

115. Which technique was introduced because a single job could not keep both the CPU and I/O devices busy?
(a) Time-sharing
(b) Spooling
(c) Preemptive scheduling
(d) Multiprogramming

116. Those directories in which the root directory has all system file and no other sub-directory is known as..
(a) flat directory
(b) single directory
(c) hierarchical directory
(d) indexed directory

117. Which is responsible for maintaining all the important abstractions of the operating system?
(a) Kernel
(b) System libraries
(c) System utilities
(d) Daemons

118. A four message reliable IPC protocol for client server communication works as ______.
(a) request, reply, acknowledgment
(b) reply, acknowledgment, request. acknowledgment
(c) request, acknowledgment, reply, acknowledgment
(d) request, request, reply, acknowledgment

119 A path name that starts at root directory is ______.
(a) absolute (b) relative
(c) hybrid (d) hierarchical

120 Where does the problem of fragmentation occur?
(a) Static storage allocation
(b) Static allocation storage
(c) Stack allocation with dynamic binding
(d) Heap allocation

121. Idempotency basically means ______.
(a) reliability (b) repeatability
(c) Survivability (d) flexibility

122. All path names are specified relative to the working directory ______.
(a) absolute path name
(b) relative path name
(c) hybrid path name
(d) hierarchical path name

123. The time taken by the disk arm to locate the specific address of a sector for getting information is called ______.
(a) rotational latency
(b) seek time
(c) search time
(d) response time

124. Which of the following is crucial time while accessing data on the disk?
(a) Seek time
(b) Rotational time
(c) Transmission time
(d) Waiting time

125. What is the primary job of the operating system is a computer?
(a) Command resources
(b) Manage resources
(c) Provide utilities
(d) Be user friendly

126. The ______ is a user process that initiates a remote procedure call
(a) Client (b) server
(c) Network (d) operating system

127. Which of the following memory allocation scheme suffers from external fragmentation?
(a) Segmentation
(b) Pure demand paging
(c) Swapping
(d) Paging

128. Which of the following is used to removal of process from active contention of CPU and reintroduce them into memory later?
(a) Interrupt (b) Swapping
(c) Signal (d) Thread

129. The operating system manages ______.
(a) memory
(b) processor
(c) disk and I/O devices
(d) all of the above

130. Information about a process is maintained in a ______.
(a) stack
(b) translation look a side buffer
(c) process control block
(d) program control block

131. Paging ______
(a) solves the memory fragmentation problem
(b) allows modular programming
(c) allows structured programming
(d) avoids deadlock

132. Which is not the layer of the Operating system?
(a) Kernel
(b) Shell
(c) Application program
(d) Critical Section

133. Distributed OS works on the ______ principle.
(a) file foundation
(b) single system image
(c) multi system image
(d) networking image

134 The collection of processes on the disk that is waiting to be brought into memory for execution forms the ______.
(a) ready queue (b) device queue
(c) input queue (d) priority queue

135. In ______ condition, processes are allowed to request for new resources without releasing the resources that they are currently holding.
(a) Mutual exclusion
(b) Hold and wait
(c) No preemption
(d) Circular wait

136. The time taken by the disk arm to locate the specific address of a sector for getting information is called ______.
(a) rotational delay
(b) seek time
(c) search time
(d) response time

137. The principle of locality of reference justifies the use of ______.
(a) virtual memory
(b) interrupts
(c) main memory
(d) cache memory

138. In ______ condition, a resource that has been allocated to a process becomes available for allocation to another process only after it has been voluntarily released by the process holding it.
(a) Mutual exclusion
(b) Hold and wait
(c) No preemption
(d) Circular wait

139. Identify the odd thing in the services of operating system ______.
(a) Accounting
(b) Protection
(c) Error detection and correction
(d) Dead lock handling

140. Which technique was introduced because a single job could keep both the CPU and the I/O devices busy?
(a) Time sharing
(b) Spooling
(c) Preemptive scheduling
(d) Multiprogramming

141. RMA works on static priorities while EDF algorithm works on ______.
(a) starvation
(b) dynamic priorities
(c) RR scheduling
(d) FIFO scheduling

142. In the ______ method of data transfer, the participation of the processor is eliminated during data transfer.
(a) buffering
(b) caching
(c) direct memory access
(d) indirect memory access

143. Inter process communication can be done through ______.
(a) mails (b) messages
(c) system calls (d) traps

144. RR scheduling is most suitable for ______.
(a) time shared OS
(b) distributed OS
(c) real time OS
(d) an Ordinary OS

145. The aim of ______ transparency is to ensure that the movement of the object is handled automatically by the system in a user transparent manner.
(a) location (b) name
(c) migration (d) scaling

146. ______ is a memory management scheme that permits the physical address space of a process to be noncontiguous.
(a) Paging
(b) Segmentation
(c) Virtual memory
(d) main memory

147. Context switching is ______.
(a) part of spooling
(b) part of polling
(c) part of interrupt handling
(d) part of paging

148. The normal functioning of an RPC may get disrupted due to ______.
(a) call message gets lost
(b) response message gets lost
(c) callee node and caller node crashes and is restarted
(d) All of the above

149. Mutual exclusion is referred as ______.
(a) if one process is in a critical region others are excluded
(b) prevents deadlock
(c) requires semaphore to implement
(d) is found only in the Windows NT operating system

150. IFO scheduling is ______.
(a) preemptive
(b) non-preemptive
(c) deadline scheduling
(d) RR scheduling

151. ______ deals with the process of deciding which process should be assigned to which processor.
(a) Process migration
(b) Processor allocation
(c) threads
(d) none of the above

152. Which scheduler controls the degree of multiprogramming?
(a) Short term scheduler
(b) Long term scheduler
(c) Middle term scheduler
(d) Pre term scheduler

153. Safe state is ______.
(a) deadlock state
(b) non-deadlocked state
(c) polling state
(d) spooling state

154. ______ time is defined as the time period for which the execution of the process is stopped for transferring its information to the destination node.
(a) turn around (b) latency
(c) freezing (d) execution

155. The principle of locality of reference justifies the use of
(a) virtual memory
(b) interrupts
(c) main memory
(d) cache memory

156. For a multiple instances of resource type which algorithm is used ______.
(a) divide and conquer algorithm
(b) banker's algorithm
(c) partition algorithm
(d) sorting algorithm

157. In memory management, a technique called as paging, the physical memory is broken into fixed sized blocks called ______.
(a) pages (b) frames
(c) blocks (d) segments

158. Which method is used to recover from deadlock?
(a) Process termination
(b) Resource preemption
(c) Resource non-preemption
(d) Process termination and Resource preemption

159 Saving the state of the old process and loading the saved state of the new process is called ______.
(a) context switch
(b) static
(c) multi programming
(d) none of the above

160. The degree of Multiprogramming is controlled by ______.
(a) CPU scheduler
(b) context switching
(c) long term scheduler
(d) medium term scheduler

161. Input transfers are done in advance and output transfers are done after sometimes in which of these technique?
(a) Spooling (b) Buffering
(c) Swapping (d) Paging

162. A binary semaphore ______.
(a) has the values one or zero
(b) is essential to binary computers
(c) is used only for synchronization
(d) is used only for mutual exclusion

163. A scheduling algorithm is fair ______.
(a) if no process faces starvation
(b) if a process is starved, detect it and run it with high priority
(c) if it uses semaphores
(d) only if a queue is used for scheduling

164. Which of the following is also known as Double buffering?
(a) anticipated buffering
(b) buffer swapping
(c) circular buffering
(d) swapping buffering

165 ______ is the ability of a system to continue functioning in the event of partial system failure.
(a) fault avoidance (b) fault tolerance
(c) fault detection (d) fault recovery

166. Virtual memory is ______.
(a) an extremely large main memory
(b) an extremely large secondary memory
(c) an illusion of extremely large main memory
(d) a type of memory used in super computers

167. Error handling and I/O interrupt handling are the functions of ______.
(a) I/O device Handle
(b) I/O traffic controller
(c) I/O scheduler
(d) I/O buffer

168. In a multi-threaded environment ______.
(a) each thread is allocated with new memory from main memory
(b) main thread terminates after the termination of child threads
(c) every process can have only one thread
(d) none of the above

169. The kernel keeps track of the state of each task by using a data structure called ______.
(a) process control block
(b) user control block
(c) memory control block
(d) hardware control block

170. A virtual device is a ______.
(a) dedicated for none purpose
(b) shared device converted to a dedicated device
(c) dedicated device converted to a shared device
(d) shared device

171. CPU scheduling is the basis of ______ operating system.
(a) batch
(b) real time
(c) multiprogramming
(d) monoprogramming

172. ______ is a high speed cache used to hold recently referenced page table entries a part of paged virtual memory.
(a) Translation look a side buffer
(b) Inverse page table
(c) Segmented page table
(d) Indexed page table

173. A technique that smooth's out peaks in I/O demand is ______.
(a) spooling (b) buffering
(c) swapping (d) paging

174. In kernel model, the operating system services such as process management, memory management are provided by the kernel.
(a) monolithic (b) micro
(c) macro (d) Complex

175. A process is said to be in ______ state if it was waiting for an event that will never occur.
(a) safe (b) unsafe
(c) starvation (d) dead lock

176. Which of the following is an example of spooled device?
(a) The terminal used to enter the input data for a program being executed
(b) The secondary memory device in a virtual memory system
(c) A line printer used to print the output of a number of jobs
(d) None of the above

177. The number of processes completed per unit time is known as______.
(a) Output (b) Throughput
(c) Efficiency (d) Capacity

178. The state of a process is defined by:
(a) the final activity of the process
(b) the activity just executed by the process
(c) the activity to next be executed by the process
(d) the current activity of the process

179. Which of the following is not the state of a process?
(a) New (b) Old
(c) Waiting (d) Running

180. The Process Control Block is:
(a) Process type variable
(b) Data Structure
(c) a secondary storage section
(d) a Block in memory

181. The entry of all the PCBs of the current processes is in:
(a) Process Register
(b) Program Counter
(c) Process Table
(d) Process Unit

182. The degree of multi-programming is:
(a) The number of processes executed per unit time
(b) The number of processes in the ready queue
(c) The number of processes in the I/O queue
(d) The number of processes in memory

183. A single thread of control allows the process to perform:
(a) Only one task at a time
(b) Multiple tasks at a time
(c) All of these

184. Which of the following do not belong to queues for processes?
(a) Job Queue (b) PCB queue
(c) Device Queue (d) Ready Queue

185. When the process issues an request:
(a) It is placed in an I/O queue
(b) It is placed in a waiting queue
(c) It is placed in the ready queue
(d) It is placed in the Job queue

186. What is a long-term scheduler?
(a) It selects which process has to be brought into the ready queue
(b) It selects which process has to be executed next and allocates CPU
(c) It selects which process to remove from memory by swapping
(d) None of these

187. If all processes I/O bound, the ready queue will almost always be ______, and the Short term Scheduler will have a ______ to do.
(a) full, little (b) full, lot
(c) empty, little (d) empty, lot

188. What is a medium-term scheduler?
(a) It selects which process has to be brought into the ready queue
(b) It selects which process has to be executed next and allocates CPU
(c) It selects which process to remove from memory by swapping
(d) None of these

189. What is a short-term scheduler?
(a) It selects which process has to be brought into the ready queue
(b) It selects which process has to be executed next and allocates CPU
(c) It selects which process to remove from memory by swapping
(d) None of these

190 The primary distinction between the short term scheduler and the long term scheduler is:
(a) The length of their queues
(b) The type of processes they schedule
(c) The frequency of their execution
(d) None of these

191. The only state transition that is initiated by the user process itself is.
(a) block (b) wakeup
(c) dispatch (d) None of these

192. In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the:
(a) Blocked state
(b) Ready state
(c) Suspended state
(d) Terminated state

193. In a multi-programming environment:
(a) the processor executes more than one process at a time
(b) the programs are developed by more than one person
(c) more than one process resides in the memory
(d) a single user can execute many programs at the same time

194. The ______ is used as an index into the page table.
(a) frame bit (b) page number
(c) page offset (d) frame offset

195. The ______ table contains the base address of each page in physical memory.
(a) process (b) memory
(c) page (d) frame

196. The size of a page is typically:
(a) varied (b) power of 2
(c) power of 4 (d) None of these

197. With paging there is no ______ fragmentation.
(a) internal (b) external
(c) either type of (d) None of these

198. The operating system maintains a ______ table that keeps track of how many frames have been allocated, how many are there, and how many are available.
(a) page (b) mapping
(c) frame (d) memory

199. Paging increases the ______ time.
(a) waiting
(b) execution
(c) context switch
(d) All of these

200. Smaller page tables are implemented as a set of ______.
(a) queues (b) stacks
(c) counters (d) registers

201. The page table registers should be built with ______.
(a) very low speed logic
b) very high speed logic
(c) a large memory space
(d) None of these

202. The jacketing technique is used to
(a) convert a blocking system call into nonblocking system call
(b) create a new thread
(c) communicate between threads
(d) terminate a thread

203. Termination of the process terminates
(a) first thread of the process
(b) first two threads of the process
(c) all threads within the process
(d) no thread within the process

204. Which one of the following is not a valid state of a thread?
(a) running (b) parsing
(c) ready (d) blocked

205. Suppose that a process is in "Blocked" state waiting for some I/O service. When the service is completed, it goes to the:
(a) Running state
(b) Ready state
(c) Suspended state
(d). Terminated state

206. The context of a process in the PCB of a process does not contain:
(a) the value of the CPU registers
(b) the process state
(c) memory-management information
(d) context switch time

207. Which of the following need not necessarily be saved on a context switch between processes? (GATE CS 2000)
(a) General purpose registers
(b) Translation look-aside buffer
(c) Program counter
(d) All of these

208. Which of the following does not interrupt a running process? (GATE CS 200QNo.
(a) A device
(b) Timer
(c) Scheduler process
(d) Power failure

209. Several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called a (n) ______.
(a) Shared Memory Segments
(b) Entry Section
(c) Race condition
(d) Process Synchronization

210. Which of the following state transitions is not possible?
(a) blocked to running
(b) ready to running
(c) blocked to ready
(d) running to blocked

211. Which module gives control of the CPU to the process selected by the short-term scheduler?
(a) dispatcher
(b) interrupt
(c) scheduler
(d) none of the mentioned

212 The processes that are residing in main memory and are ready and waiting to execute are kept on a list called
(a) job queue
(b) ready queue
(c) execution queue
(d) process queue

213. The interval from the time of submission of a process to the time of completion is termed as
(a) waiting time
(b) turnaround time
(c) response time
(d) throughput

214. Which scheduling algorithm allocates the CPU first to the process that requests the CPU first?
(a) first-come, first-served scheduling
(b) shortest job scheduling
(c) priority scheduling
(d) none of the mentioned

1215. In priority scheduling algorithm
(a) CPU is allocated to the process with highest priority
(b) CPU is allocated to the process with lowest priority
(c) equal priority processes cannot be scheduled
(d) none of the mentioned

216. In priority scheduling algorithm, when a process arrives at the ready queue, its priority is compared with the priority of
(a) all process
(b) currently running process
(c) parent process
(d) init process

217. Time quantum is defined in
(a) shortest job scheduling algorithm
(b) round robin scheduling algorithm
(c) priority scheduling algorithm
(d) multilevel queue scheduling algorithm

118. Process are classified into different groups in
(a) shortest job scheduling algorithm
(b) round robin scheduling algorithm
(c) priority scheduling algorithm
(d) multilevel queue scheduling algorithm

219. In multilevel feedback scheduling algorithm
(a) a process can move to a different classified ready queue
(b) classification of ready queue is permanent
(c) processes are not classified into groups
(d) none of the mentioned

220. Which one of the following cannot be scheduled by the kernel?
(a) kernel level thread
(b) user level thread
(c) process
(d) none of the mentioned

221. With round robin scheduling algorithm in a time shared system,
(a) using very large time slices converts it into First come First served scheduling algorithm
(b) using very small time slices converts it into First come First served scheduling algorithm
(c) using extremely small time slices increases performance
(d) using very small time slices converts it into Shortest Job First algorithm

222. The portion of the process scheduler in an operating system that dispatches processes is concerned with:
(a) assigning ready processes to CPU
(b) assigning ready processes to waiting queue
(c) assigning running processes to blocked queue
(d) All of these

223 Complex scheduling algorithms:
(a) are very appropriate for very large computers
(b) use minimal resources
(c) use many resources
(d) All of these

224. The FIFO algorithm:
(a) first executes the job that came in last in the queue
(b) first executes the job that came in first in the queue
(c) first executes the job that needs minimal processor
(d) first executes the job that has maximum processor needs

225. The strategy of making processes that are logically runnable to be temporarily suspended is called:
(a) Non preemptive scheduling
(b) Preemptive scheduling
(c) Shortest job first
(d) First come First served

226. Scheduling is:
(a) allowing a job to use the processor
(b) making proper use of processor
(c) Both a and b
(d) None of these

227. Orders are processed in the sequence they arrive if ______ rule sequences the jobs.
(a) earliest due date
(b) slack time remaining
(c) first come, first served
(d) critical ratio

228 Which of the following algorithms tends to minimize the process flow time?
(a) First come First served
(b) Shortest Job First
(c) Earliest Deadline First
(d) Longest Job First

229. Under multiprogramming, turnaround time for short jobs is usually ______ and that for long jobs is slightly ______.
(a) Lengthened; Shortened
(b) Shortened; Lengthened
(c) Shortened; Shortened
(d) Shortened; Unchanged

230. This section of our 1000+ Operating System MCQs focuses on deadlock in Operating System.

231. What is the reusable resource?
(a) that can be used by one process at a time and is not depleted by that use
(b) that can be used by more than one process at a time
(c) that can be shared between various threads
(d) none of the mentioned

232. Which of the following condition is required for deadlock to be possible?
(a) mutual exclusion
(b) a process may hold allocated resources while awaiting assignment of other resources
(c) no resource can be forcibly removed from a process holding it
(d) all of the mentioned

233. A system is in the safe state if
(a) the system can allocate resources to each process in some order and still avoid a deadlock
(b) there exist a safe sequence
(c) both (a) and (b)
(d) none of the mentioned

234. The circular wait condition can be prevented by
(a) defining a linear ordering of resource types
(b) using thread
(c) using pipes
(d) all of the mentioned

235. Which one of the following is the deadlock avoidance algorithm?
(a) banker's algorithm
(b) round-robin algorithm
(c) elevator algorithm
(d) karn's algorithm

236. What is the drawback of banker's algorithm?
(a) in advance processes rarely know that how much resource they will need
(b) the number of processes changes as time progresses
(c) resource once available can disappear
(d) all of the mentioned

237. For effective operating system, when to check for deadlock?
(a) every time a resource request is made
(b) at fixed time intervals
(c) both (a) and (b)
(d) none of the mentioned

238. A problem encountered in multitasking when a process is perpetually denied necessary resources is called
(a) deadlock (b) starvation
(c) inversion (d) aging

239. Which one of the following is a visual (mathematical) way to determine the deadlock occurrence?
(a) resource allocation graph
(b) starvation graph
(c) inversion graph
(d) none of the mentioned

240 To avoid deadlock
(a) there must be a fixed number of resources to allocate
(b) resource allocation must be done only once
(c) all deadlocked processes must be aborted
(d) inversion technique can be used

241. CPU fetches the instruction from memory according to the value of
(a) program counter
(b) status register
(c) instruction register
(d) program status word

242. A memory buffer used to accommodate a speed differential is called
(a) stack pointer (b) cache
(c) accumulator (d) disk buffer

243. Which one of the following is the address generated by CPU?
(a) physical address
(b) absolute address
(c) logical address
(d) none of the mentioned

244. Run time mapping from virtual to physical address is done by
(a) memory management unit
(b) CPU
(c) PCI
(d) none of the mentioned

245. Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called
(a) fragmentation
(b) paging
(c) mapping
(d) none of the mentioned

246. The address of a page table in memory is pointed by
(a) stack pointer
(b) page table base register
(c) page register
(d) program counter

247. Program always deals with
(a) logical address
(b) absolute address
(c) physical address
(d) relative address

248 The page table contains
(a) base address of each page in physical memory
(b) page offset
(c) page size
(d) none of the mentioned

249 What is compaction?
(a) a technique for overcoming internal fragmentation
(b) a paging technique
(c) a technique for overcoming external fragmentation
(d) a technique for overcoming fatal error

250. Operating System maintains the page table for
(a) each process
(b) each thread
(c) each instruction
(d) each address

251. The operating system is:
(a) in the low memory
(b) in the high memory
(c) either a or b (depending on the location of interrupt vector)
(d) None of these

252. In contiguous memory allocation:
(a) each process is contained in a single contiguous section of memory
(b) all processes are contained in a single contiguous section of memory
(c) the memory space is contiguous
(d) None of these

253. The relocation register helps in:
(a) providing more address space to processes
(b) a different address space to processes
(c) to protect the address spaces of processes
(d) None of these

254. With relocation and limit registers, each logical address must be ___ the limit register.
(a) less than (b) equal to
(c) greater than (d) None of these

255. The operating system and the other processes are protected from being modified by an already running process because:
(a) they are in different memory spaces
(b) they are in different logical addresses
(c) they have a protection algorithm
(d) every address generated by the CPU is being checked against the relocation and limit registers

256. Transient operating system code is code that:
(a) is not easily accessible
(b) comes and goes as needed
(c) stays in the memory always
(d) never enters the memory space

257. Using transient code, _____ the size of the operating system during program execution.
(a) increases (b) decreases
(c) changes (d) maintains

258. When memory is divided into several fixed sized partitions, each partition may contain _____.
(a) exactly one process
(b) at least one process
(c) multiple processes at once
(d) None of these

259. In fixed sized partition, the degree of multiprogramming is bounded by _____.
(a) the number of partitions
(b) the CPU utilization
(c) the memory size
(d) All of these

260 The first fit, best fit and worst fit are strategies to select a ______.
(a) process from a queue to put in memory
(b) processor to run the next process
(c) free hole from a set of available holes
(d) All of these

261 Physical memory is broken into fixed-sized blocks called ______.
(a) frames (b) pages
(c) backing store (d) None of these

262. Logical memory is broken into blocks of the same size called ______.
(a) frames (b) pages
(c) backing store (d) None of these

263 The register context and stacks of a thread are deallocated when the thread
(a) terminates (b) blocks
(c) unblocks (d) spawns

264. Thread synchronization is required because
(a) all threads of a process share the same address space
(b) all threads of a process share the same global variables
(c) all threads of a process can share the same files
(d) all of the mentioned

265 Because of virtual memory, the memory can be shared among
(a) processes
(b) threads
(c) instructions
(d) none of the mentioned

266 ______ is the concept in which a process is copied into main memory from the secondary memory according to the requirement.
(a) Paging (b) Demand paging
(c) Segmentation (d) Swapping

267. The pager concerns with the
(a) individual page of a process
(b) entire process
(c) entire thread
(d) first page of a process

268. Swap space exists in
(a) primary memory
(b) secondary memory
(c) CPU
(d) none of the mentioned

269. When a program tries to access a page that is mapped in address space but not loaded in physical memory, then
(a) segmentation fault occurs
(b) fatal error occurs
(c) page fault occurs
(d) no error occurs

270. Effective access time is directly proportional to
(a) page-fault rate
(b) hit ratio
(c) memory access time
(d) none of the mentioned

271. In FIFO page replacement algorithm, when a page must be replaced
(a) oldest page is chosen
(b) newest page is chosen
(c) random page is chosen
(d) none of the mentioned

272. Which algorithm chooses the page that has not been used for the longest period of time whenever the page required to be replaced?
(a) first in first out algorithm
(b) additional reference bit algorithm
(c) least recently used algorithm
(d) counting based page replacement algorithm

273 A process is thrashing if
(a) it is spending more time paging than executing
(b) it is spending less time paging than executing
(c) page fault occurs
(d) swapping cannot take place

274. For larger page tables, they are kept in main memory and a ______ points to the page table
(a) page table base register
(b) page table base pointer
(c) page table register pointer
(d) page table base

275. For every process there is a ______.
(a) page table
(b) copy of page table
(c) pointer to page table
(d) All of these

276. Time taken in memory access through PTBR is:
(a) extended by a factor of 3
(b) extended by a factor of 2
(c) slowed by a factor of 3
(d) slowed by a factor of 2

277. A scheduling algorithm can use either ______ priority or ______ priority.
(a) static, still (b) static, dynamic
(c) live, dead (d) None of these

278. The priority of a process will ______ if the scheduler assigns it a static priority.
(a) change
(b) remain unchanged
(c) depends on the operating system
(d) None of these

279. As disks have relatively low transfer rates and relatively high latency rates, disk schedulers must reduce latency times to:
(a) ensure high bandwidth
(b) ensure low bandwidth
(c) make sure data is transferred
(d) reduce data transfer speeds

280 Servicing requests strictly according to deadline using EDF may result in:
(a) lower seek times
(b) lower bandwidth
(c) higher seek time
(d) higher bandwidth

281. Which of the following are the functions of operating system?
i) recovering from errors ii) facilitating input/output
iii) facilitating parallel operation iv) sharing hardware among users
v) implementing user interface
(a) i, ii, ii, and v only
(b) i, ii, iii, and iv only
(c) ii, iii, iv and v only
(d) All i, ii, iii, iv and v

282. The hybrid algorithm that combines EDF with SCAN algorithm is known as
(a) EDS (b) SDF
(c) SCAN-EDF (d) None of these

283. If several requests have different deadlines that are relatively close together, then using the SCAN – EDF algorithm:
(a) the SCAN ordering will service the requests in that batch
(b) the EDF ordering will service the requests in that batch
(c) the FCFS ordering will service the requests in that batch
(d) None of these

284 Multimedia systems require ______ scheduling to ensure critical tasks will be serviced within timing deadlines.
(a) soft real time (b) hard real time
(c) normal (d) None of these

285. The EDF scheduler uses ______ to order requests according to their deadlines
(a) stack (b) disks
(c) queue (d) None of these

286. In SCAN – EDF, requests with the same deadlines are ordered according to:
(a) SCAN policy (b) EDF policy
(c) FCFS policy (d) FIFO policy

287. Linux uses a time-sharing algorithm
(a) to pair preemptive scheduling between multiple processes
(b) for tasks where absolute priorities are more important than fairness
(c) both (a) and (b)
(d) none of the mentioned

288. Which one of the following Linux file system does not support journaling feature?
(a) ext2
(b) ext3
(c) ext4
(d) none of the mentioned

289. Which binary format is supported by Linux?
(a) a.out
(b) ELF
(c) both (a) and (b)
(d) none of the mentioned

290. Which one of the following boot loader is not used by Linux?
(a) GRUB
(b) LILO
(c) NTLDR
(d) None of the mentioned

291. The first process launched by the Linux kernel is
(a) init process (b) zombie process
(c) batch process (d) boot process

292. Which desktop environment is not used in any Linux distribution?
(a) gnome
(b) KDE
(c) unity
(d) none of the mentioned

293. Standard set of functions through which interacts with kernel is defined by
(a) system libraries
(b) kernel code
(c) compilers
(d) utility programs

294 Linux is
(a) single user, single tasking
(b) single user, multitasking
(c) multiuser, single tasking
(d) multiuser, multitasking

295. Which one of the following is not a Linux distribution?
(a) debian (b) Gentoo
(c) open SUSE (d) multics

296. Which one of the following is not shared by threads?
(a) program counter
(b) stack
(c) both (a) and (b)
(d) none of the mentioned

297. A process can be
(a) single threaded
(b) multithreaded
(c) both (a) and (b)
(d) none of the mentioned

298. If one thread opens a file with read privileges then
(a) other threads in the another process can also read from that file
(b) other threads in the same process can also read from that file
(c) any other thread cannot read from that file
(d) all of the mentioned

299 The time required to create a new thread in an existing process is
(a) greater than the time required to create a new process
(b) less than the time required to create a new process
(c) equal to the time required to create a new process
(d) none of the mentioned

300. When the event for which a thread is blocked occurs,
(a) thread moves to the ready queue
(b) thread remains blocked
(c) thread completes
(d) a new thread is provided

Answers

1. a	2. c	3. d	4. a	5. b	6. d	7. d	8. c	9. d
10. c	11. b	12. a	13. b	14. a	15. b	16. a	17. d	18. b
19. b	20. d	21. c	22. a	23. b	24. d	25. c	26. a	27. d
28. c	29. d	30. b	31. a	32. d	33. a	34. b	35. d	36. a
37. c	38. d	39. b	40. a	41. b	42. a	43. a	44. a	45. d
46. c	47. c	48. a	49. c	50. b	51. c	52. a	53. b	54. a
55. c	56. d	57. a	58. d	59. b	60. a	61. b	62. a	63. b
64. b	65. c	66. a	67. a	68. b	69. a	70. c	71. d	72. b
73. b	74. a	75. a	76. c	77. c	78. d	79. c	80. b	81. b
82. c	83. a	84. d	85. b	86. d	87. b	88. b	89. c	90. a
91. b	92. a	93. c	94. b	95. c	96. b	97. d	98. a	99. c
100. b	101. d	102. c	103. a	104. c	105. b	106. c	107. a	108. b
109. a	110. d	111. d	112. b	113. a	114. c	115. d	116. a	117. a
118. c	119. a	120. b	121. b	122. b	123. d	124. a	125. b	126. a
127. a	128. b	129. d	130. c	131. a	132. d	133. b	134. c	135. b
136. b	137. d	138. c	139. c	140. d	141. c	142. c	143. b	144. a
145. c	146. a	147. c	148. d	149. a	150. b	151. b	152. b	153. b
154. c	155. d	156. b	157. b	158. d	159. a	160. c	161. b	162. a
163. a	164. b	165. b	166. c	167. a	168. b	169. a	170. b	171. c
172. a	173. b	174. a	175. d	176. c	177. b	178. d	179. b	180. b
181. c	182. d	183. a	184. b	185. a	186. a	187. c	188. c	189. b
190. c	191. a	192. b	193. c	194. b	195. c	196. b	197. b	198. c
199. c	200. d	201. b	202. a	202. a	203. c	204. b	205. b	206. d
207. b	208. c	209. c	210. a	211. a	212. b	213. b	214. a	215. a
216. b	217.d	218. d	219. a	220. b	221. a	222. a	223. a	224. b
225. b	226. c	227. c	228. b	229. b	230. a	231. a	232. d	233. c
234. a	235. a	236. d	237. c	238. b	239. a	240. a	241. a	242. b
243. c	244. a	245. b	246. b	247. a	248. a	249. c	250. a	251. c
252. a	253. c	254. a	255. d	256. b	257. c	258. a	259. a	260. c
261. a	262. b	263. a	264. d	265. a	266. b	267. a	268. b	269. c
270. a	271. a	272. c	273. a	274. a	275. a	276. d	277. b	278. b
279. a	280. c	281. d	282. c	283. a	284. b	285. c	286. a	287. a
288. a	289. c	290. c	291. a	292. d	293. a	294. d	295. d	296. c
297. c	298. b	299. b	300. a					

Artificial Intelligence

1. If a robot can alter its own trajectory in response to external conditions, it is considered to be:
   (a) intelligent (b) mobile
   (c) open loop (d) non-servo

2. Which of the following is true related to 'Satisfiable' property?
   (a) A statement is satisfiable if there is some interpretation for which it is false
   (b) A statement is satisfiable if there is some interpretation for which it is true
   (c) A statement is satisfiable if there is no interpretation for which it is true
   (d) A statement is satisfiable if there is no interpretation for which it is false

3. Two literals are complementary if
   (a) They are equal
   (b) They are identical and of equal sign
   (c) They are identical but of opposite sign
   (d) They are unequal but of equal sign

4. Consider a good system for the representation of knowledge in a particular domain. What property should it possess?
   (a) Representational Adequacy
   (b) Inferential Adequacy
   (c) Inferential Efficiency
   (d) All the mentioned

5. What is Transposition rule?
   (a) From P → Q, infer ~Q → P
   (b) From P → Q, infer Q → ~P
   (c) From P → Q, infer Q → P
   (d) From P → Q, infer ~Q → ~P

6. Third component of a planning system is to
   (a) Detect when a solution has been found
   (b) Detect when solution will be found
   (c) Detect whether solution exists or not
   (d) Detect whether multiple solutions exist

7. In default logic, we allow inference rules of the form
   (a) (A : (b) / C (b) A / (B : C)
   (c) A / B (d) A / B : C

8. In Bayes theorem, what is the meant by P(Hi|E)?
   (a) The probability that hypotheses Hi is true given evidence E
   (b) The probability that hypotheses Hi is false given evidence E
   (c) The probability that hypotheses Hi is true given false evidence E
   (d) The probability that hypotheses Hi is false given false evidence E

9. The process of removing detail from a given state representation is called______.
   (a) Extraction
   (b) Abstraction
   (c) Information Retrieval
   (d) Mining of data

10. A problem solving approach works well for
    (a) 8-Puzzle problem
    (b) 8-queen problem
    (c) Finding a optimal path from a given source to a destination
    (d) Mars Hover (Robot Navigation)

11. The ______ is a touring problem in which each city must be visited exactly once. The aim is to find the shortest tour.
(a) Finding shortest path between a source and a destination
(b) Travelling Salesman problem
(c) Map coloring problem
(d) Depth first search traversal on a given map represented as a graph

12. Which search strategy is also called as blind search?
(a) Uninformed search
(b) Informed search
(c) Simple reflex search
(d) All of the mentioned

13. How many types are available in uninformed search method?
(a) 3 (b) 4
(c) 5 (d) 6

14. ______ includes what we know about our own performance as cognitive processors.
(a) Meta-Knowledge
(b) Performance Knowledge
(c) Standard knowledge
(d) Specific knowledge

15. State whether the following true or false.
i) AI is used in diverse fields like space exploration, robotics.
ii) AI is used for military purpose
(a) i-True, ii-False
(b) i-True, ii-True
(c) i-False, ii-False
(d) i-False, ii-True

16. The goals of AI systems can be described in terms of cognitive tasks like
(a) Recognizing objects
(b) Answering questions
(c) Manipulating robotic devices
(d) All of the above

17. ______ is computerized advice-giver, that is capable of reasoning but which is usually confined to a rather narrow field of knowledge.
(a) Expert system
(b) Knowledge system
(c) Common system
(d) Communication system

18. ______ involves relating something new to what we already know in a psychologically complex way.
(a) Knowledge Acquisition
(b) Knowledge retrieval
(c) Reasoning
(d) Meta-level reasoning

19. What is Artificial intelligence?
(a) Putting your intelligence into Computer
(b) Programming with your own intelligence
(c) Making a Machine intelligent
(d) Playing a Game

20. Which is not the commonly used programming language for AI?
(a) PROLOG (b) Java
(c) LISP (d) Perl

21. Which instruments are required for perceiving and acting upon the environment?
(a) Sensors and Actuators
(b) Sensors
(c) Perceiver
(d) None of the above

22. Artificial Intelligence has its expansion in the following application. (Mark all that apply)
(a) Planning and Scheduling
(b) Game Playing
(c) Diagnosis
(d) All of the above

23. An 'agent' is anything that,
(a) Perceives its environment through sensors and acting upon that environment through actuators
(b) Takes input from the surroundings and uses its intelligence and performs the desired operations
(c) A embedded program controlling line following robot
(d) All of the mentioned

24. What is perception sequence of an agent?
(a) A periodic inputs sets
(b) a complete history of everything the agent has ever perceived
(c) Both (a) and b)
(d) None of the mentioned

25. Agents behavior can be best described by
(a) Perception sequence
(b) Agent function
(c) Sensors and Actuators
(d) Environment in which agent is performing

26. Which search agent operates by interleaving computation and action?
(a) Offline search
(b) Online search
(c) Breadth-first search
(d) Depth-first search

27. What is called as exploration problem?
(a) State and actions are unknown to the agent
(b) State and actions are known to the agent
(c) Only actions are known to agent
(d) Both b & c

28. Which are necessary for an agent to solve an online search problem?
(a) Actions
(b) Step-cost function
(c) Goal-test
(d) All of the mentioned

29. When do we call the states are safely explorable?
(a) A goal state is unreachable from any state
(b) A goal state is denied access
(c) A goal state is reachable from every state
(d) None of the mentioned

30. In which state spaces does the online-dfs-agent will work?
(a) Irreversible state spaces
(b) Reversible state spaces
(c) Searchable state spaces
(d) All of the mentioned

31. Which of the following algorithm is online search algorithm?
(a) Breadth-first search algorithm
(b) Depth-first search algorithm
(c) Hill-climbing search algorithm
(d) None of the mentioned

32. Which search algorithm will use limited amount of memory?
(a) RBFS
(b) SMA
(c) Hill-climbing search algorithm
(d) Both a & b

33. What is meant by simulated annealing in artificial intelligence?
(a) Returns an optimal solution when there is a proper cooling schedule
(b) Returns an optimal solution when there is no proper cooling schedule
(c) It will not return an optimal solution when there is a proper cooling Schedule
(d) None of the mentioned

34. How the new states are generated in genetic algorithm?
(a) Composition (b) Mutation
(c) Cross-over (d) Both b & c

35. Which method is effective for escaping from local minima?
(a) Updating heuristic estimate
(b) Reducing heuristic estimate
(c) Eliminating heuristic estimate
(d) None of the mentioned

36. Which depends on the percepts and actions available to the agent?
(a) Agent
(b) Sensor
(c) Design problem
(d) None of the mentioned

37. Which were built in such a way that humans had to supply the inputs and interpret the outputs?
(a) Agents (b) AI system
(c) Sensor (d) Actuators

38. Which technology uses miniaturized accelerometers and gyroscopes?
(a) Sensors
(b) Actuators
(c) MEMS
(d) None of the mentioned

39 Which agent enables the deliberation about the computational entities and actions?
(a) Hybrid
(b) Reflective
(c) Relational
(d) None of the mentioned

40. What can operate over the joint state space?
(a) Decision-making algorithm
(b) Learning algorithm
(c) Complex algorithm
(d) Both a & b

41. What is the action of task environment in artificial intelligence?
(a) Problem
(b) Solution
(c) Agent
(d) Observation

42. What is the expansion if PEAS in task environment?
(a) Peer, Environment, Actuators, Sense
(b) Perceiving, Environment, Actuators, Sensors
(c) Performance, Environment, Actuators, Sensors,
(d) None of the mentioned

43. What kind of observing environments are present in artificial intelligence?
(a) Partial (b) Fully
(c) Learning (d) Both a & b

44. What kind of environment is strategic in artificial intelligence?
(a) Deterministic (b) Rational
(c) Partial (d) Stochastic

45. What kind of environment is crossword puzzle?
(A) Static
(b) Dynamic
(c) Semi dynamic
(d) None of the mentioned

46. What kind of behavior does the stochastic environment possess?
(a) Local (b) Deterministic
(c) Rational (d) Primary

47. The fundamental ideas about retrieval that have been developed in AI systems might be termed as _____ and _____.
(a) Analogy, reasoning
(b) Thinking, doing
(c) Event, domain
(d) Linking, lumping

48. Robot machine might have cameras and infrared range finders for _____ and various motors of _____.
(a) Sensors, Agents
(b) Agents, Actuators
(c) Actuators, Sensors
(d) Sensors, Actuators

49. _____ are rules of thumb that may solve a given problem, but do not guarantee a solution.
(a) Strong methods
(b) Weak methods
(c) Heuristic
(d) Probabilistic

50. _____ is the primary consideration in designing knowledge-based AI systems.
(a) Analogy (b) Efficiency
(c) Efficacy (d) Acquisition

51. The initial state and successor function implicitly define state space of the problem
(a) Initial state
(b) State space
(c) Problem space
(d) Problem place

52. _____ are data structures giving "snapshots" of the condition of the problem at each stage of its solution.
(a) States
(b) Operators
(c) Heuristic
(d) None of the above

53. _____ are means for transforming the problem from one state to another.
(a) States
(b) Operators
(c) Heuristic
(d) None of the above

54. _____ is called the father of AI.
(a) James C Gosling
(b) Dennis Ritchie
(c) Alan Turing
(d) Isaac Newton

55. In AI _____ is a combination of data structures and interpretive procedures.
(a) Knowledge
(b) Meta-knowledge
(c) Artificial Knowledge
(d) Performance

56. The _____ approach uses the knowledge of mathematics and engineering.
(a) rationalist
(b) Top-down
(c) bottom-up
(d) push-pop approach

57. We also use knowledge about what we know, called _____.
(a) Meta-Knowledge
(b) Performance Knowledge
(c) Standard knowledge
(d) Specific knowledge

58. The Artificial Intelligence is concerned with designing intelligent computer systems that exhibit intelligent characteristics expressed by _____.
(a) Functional behavior
(b) Human behavior
(c) Human brain
(d) Statistical analysis

59. Which environment is called as semi dynamic?
(a) Environment does not change with the passage of time
(b) Agent performance changes
(c) Environment will be changed
(d) Both a & b

60. Where does the performance measure is included?
(a) Rational agent
(b) Task environment
(c) Actuators
(d) Sensor

61. Which is used to provide the feedback to the learning element?
(a) Critic
(b) Actuators
(c) Sensor
(d) None of the mentioned

62. The main task of a problem-solving agent is
(a) Solve the given problem and reach to goal
(b) To find out which sequence of action will get it to the goal state
(c) Both (a) and b)
(d) Neither (a) nor b)

63 What is state space?
(a) The whole problem
(b) Your Definition to a problem
(c) Problem you design
(d) Representing your problem with variable and parameter

64 A search algorithm takes _____ as an input and returns _____ as an output.
(a) Input, output
(b) Problem, solution
(c) Solution, problem
(d) Parameters, sequence of actions

65 The Set of actions for a problem in a state space is formulated by a _____.
(a) Intermediate states
(b) Initial state
(c) Successor function, which takes current action and returns next immediate state
(d) None of the mentioned

66 Which search is implemented with an empty first-in-first-out queue?
(a) Depth-first search
(b) Breadth-first search
(c) Bidirectional search
(d) None of the mentioned

67. When is breadth-first search is optimal?
(a) When there is less number of nodes
(b) When all step costs are equal
(c) When all step costs are unequal
(d) Both a & c

68. How many successors are generated in backtracking search?
(a) 1 (b) 2
(c) 3 (d) 4

69. What is the space complexity of Depth-first search?
(a) O(b) (b) O(bl)
(c) O(m) (d) O(bm)

70. How many parts does a problem consists of?
(a) 1 (b) 2
(c) 3 (d) 4

71. Which algorithm is used to solve any kind of problem?
(a) Breath-first algorithm
(b) Tree algorithm
(c) Bidirectional search algorithm
(d) None of the mentioned

72. Which search algorithm imposes a fixed depth limit on nodes?
(a) Depth-limited search
(b) Depth-first search
(c) Iterative deepening search
(d) Bidirectional search

73. Which search implements stack operation for searching the states?
(a) Depth-limited search
(b) Depth-first search
(c) Breadth-first search
(d) None of the mentioned

74 What is used for tracking uncertain events?
(a) Filtering algorithm
(b) Sensors
(c) Actuators
(d) None of the mentioned

75. What is not represented by using propositional logic?
(a) Objects
(b) Relations
(c) Both a & b
(d) None of the mentioned

76. Which functions are used as preferences over state history?
(a) Award (b) Reward
(c) Explicit (d) Implicit

77. Which kind of agent architecture should an agent can use?
(a) Relaxed
(b) Logic
(c) Relational
(d) All of the mentioned

78 Specify the agent architecture name that is used to capture all kinds of actions.
(a) Complex
(b) Relational
(c) Hybrid
(d) None of the mentioned

79 A heuristic is a way of trying
(a) To discover something or an idea embedded in a program
(b) To search and measure how far a node in a search tree seems to be from a goal
(c) To compare two nodes in a search tree to see if one is better than another
d) Only a), (b) and c)

80. A* algorithm is based on
(a) Breadth-First-Search
(b) Depth-First –Search
(c) Best-First-Search
(d) Hill climbing

81. Best-First search is a type of informed search, which uses _____ to choose the best next node for expansion.
(a) Evaluation function returning lowest evaluation
(b) Evaluation function returning highest evaluation
(c) Both a & b can be used
(d) None of them is applicable

82. Best-First search can be implemented using the following data structure.
(a) Queue (b) Stack
(c) Priority Queue (d) Circular Queue

83. Heuristic function h(n) is,
(a) Lowest path cost
(b) Cheapest path from root to goal node
(c) Estimated cost of cheapest path from root to goal node
(d) Average path cost

84. The values of the set membership is represented by
(a) Discrete Set (b) Degree of truth
(c) Probabilities (d) Both b & c

85. What is meant by probability density function?
(a) Probability distributions
(b) Continuous variable
(c) Discrete variable
(d) Probability distributions for Continuous variables

86. Which of the following is used for probability theory sentences?
(a) Conditional logic
(b) Logic
(c) Extension of propositional logic
(d) None of the mentioned

87. A perceptron is:
(a) a single layer feed-forward neural network with pre-processing
(b) an auto-associative neural network
(c) a double layer auto-associative neural network
(d) a neural network that contains feedback

88. An auto-associative network is:
(a) a neural network that contains no loops
(b) a neural network that contains feedback
(c) a neural network that has only one loop
(d) a single layer feed-forward neural network with pre-processing

89. Which of the following is true?
(i) On average, neural networks have higher computational rates than conventional computers.
(ii) Neural networks learn by example.
(iii) Neural networks mimic the way the human brain works.
(a) All of the mentioned are true
(b) (ii) and (iii) are true
(c) (i), (ii) and (iii) are true
(d) None of the mentioned

90. Which of the following is true for neural networks?
(i) The training time depends on the size of the network.
(ii) Neural networks can be simulated on a conventional computer.
(iii) Artificial neurons are identical in operation to biological ones.
(a) All of the mentioned
(b) (ii) is true
(c) (i) and (ii) are true
(d) None of the mentioned

91. Greedy search strategy chooses the node for expansion
(a) Shallowest
(b) Deepest
(c) The one closest to the goal node
(d) Minimum heuristic cost

92. In greedy approach evaluation function is
(a) Heuristic function
(b) Path cost from start node to current node
(c) Path cost from start node to current node + Heuristic cost
(d) Average of Path cost from start node to current node and Heuristic cost

93. In many problems the path to goal is irrelevant, this class of problems can be solved using,
(a) Informed Search Techniques
(b) Uninformed Search Techniques
(c) Local Search Techniques
(d) Only a and b

94. Hill climbing sometimes called ______ because it grabs a good neighbor state without thinking ahead about where to go next.
(a) Needy local search
(b) Heuristic local search
(c) Greedy local search
(d) Optimal local search

95. Hill-Climbing approach stuck for the following reasons
(a) Local maxima (b) Ridges
(c) Plateaux (d) All of above

96. ______ is/are useful when the original formulation of a problem is altered in some way, typically because the set of constraints to consider evolves because of the environment.
(a) Static CSPs
(b) Dynamic CSPs
(c) Flexible CSPs
(d) None of the above

97. General games involves,
(a) Single-agent
(b) Multi-agent
(c) Neither a nor b
(d) Only a and b

98. Adversarial search problems uses,
(a) Competitive Environment
(b) Cooperative Environment
(c) Neither a nor b
(d) Only a and b

99. Zero sum game has to be a ______ game.
(a) Single player (b) Two player
(c) Multiplayer (d) Three player

100. The initial state and the legal moves for each side define the ______ for the game.
(a) Search Tree
(b) Game Tree
(c) State Space Search
(d) Forest

101. General algorithm applied on game tree for making decision of win/lose is ______.
(a) DFS/BFS Search Algorithms
(b) Heuristic Search Algorithms
(c) Greedy Search Algorithms
(d) MIN/MAX Algorithms

102. Knowledge and reasoning also play a crucial role in dealing with ______ environment.
(a) Completely Observable
(b) Partially Observable
(c) Neither a nor b
(d) Only a and b

103. Treatment chosen by doctor for a patient for a disease is based on
(a) Only current symptoms
(b) Current symptoms plus some knowledge from the textbooks
(c) Current symptoms plus some knowledge from the textbooks plus experience
(d) Only a and b

104. (a) Knowledge base (K(b) is consists of set of statements.(b) Inference is deriving a new sentence from the KB. Choose the correct option.
(a) A is true, B is true
(b) A is false, B is false
(c) A is true, B is false
(d) A is false, B is true

105. Wumpus World is a classic problem, best example of,
(a) Single player Game
(b) Two player Game
(c) Reasoning with Knowledge
(d) Knowledge based Game

106. 'α |= β '(to mean that the sentence α entails the sentence β) if and only if, in every model in which α is ______, β is also ______.
(a) True, true (b) True, false
(c) False, true (d) False, false

107. Which is created by using single propositional symbol?
(a) Complex sentences
(b) Atomic sentences
(c) Composition sentences
(d) None of the mentioned

108. Which is used to construct the complex sentences?
(a) Symbols
(b) Connectives
(c) Logical connectives
(d) All of the mentioned

109. How many proposition symbols are there in artificial intelligence?
(a) 1 (b) 2
(c) 3 (d) 4

110. How many logical connectives are there in artificial intelligence?
(a) 2 (b) 3
(c) 4 (d) 5

111 Which is used to compute the truth of any sentence?
(a) Semantics of propositional logic
(b) Alpha-beta pruning
(c) First-order logic
d) Both a & b

112. Which are needed to compute the logical inference algorithm?
(a) Logical equivalence
(b) Validity
(c) Satisfiability
(d) All of the mentioned

113. From which rule does the modus ponens are derived?
(a) Inference rule
(b) Module rule
(c) Both a & b
(d) None of the mentioned

114. Which is also called single inference rule?
(a) Reference
(b) Resolution
(c) Reform
(d) None of the mentioned

115. Which form is called as conjunction of disjunction of literals?
(a) Conjunctive normal form
(b) Disjunctive normal form
(c) Normal form
(d) All of the mentioned

116. Which is used to select the particular environment to run the agent?
(a) Environment creator
(b) Environment Generator
(c) Both a & b
(d) None of the mentioned

117. The High level language ______ has now become the dominant AI programming language.
(a) Ada (b) Lisp
(c) AI pro (d) High AI

118. In AI, a representation of ______ is a combination of data structures and interpretive procedures that is used in the right way in a program.
(a) Knowledge (b) Power
(c) Strength (d) Intelligence

119. ______ is an environment in which the search takes place.
(a) problem place
(b) problem instance
(c) problem space
(d) None of the above

120. What can be viewed as a single literal of disjunction?
(a) Multiple clause
(b) Combine clause
(c) Unit clause
(d) None of the mentioned

121. Which is not a property of representation of knowledge?
(a) Representational Verification
(b) Representational Adequacy
(c) Inferential Adequacy
(d) Inferential Efficiency

122. Which is not Familiar Connectives in First Order Logic?
(a) and (b) if
(c) or (d) not

123 Inference algorithm is complete only if.
(a) It can derive any sentence
(b) It can derive any sentence that is an entailed version
(c) It is truth preserving
(d) Both b & c

124 Which are needed to compute the logical inference algorithm?
(a) Logical equivalence
(b) Validity
(c) Satisfiability
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127. Which form is called as conjunction of disjunction of literals?
(a) Conjunctive normal form
(b) Disjunctive normal form
(c) Normal form
(d) All of the mentioned

128 First Order Logic is also known as,
(a) First Order Predicate Calculus
(b) Quantification Theory
(c) Lower Order Calculus
(d) All of the mentioned above

129. The adjective "first-order" distinguishes first-order logic from ______ in which there are predicates having predicates or functions as arguments, or in which one or both of predicate quantifiers or function quantifiers are permitted.
(a) Representational Verification
(b) Representational Adequacy
(c) Higher Order Logic
(d) Inferential Efficiency

130. Which is not Familiar Connectives in First Order Logic?
(a) and (b) iff
(c) or (d) not

131. Inference algorithm is complete only if.
(a) It can derive any sentence
(b) It can derive any sentence that is an entailed version
(c) It is truth preserving
(d) Both b & c

132. Which are needed to compute the logical inference algorithm?
(a) Logical equivalence
(b) Validity
(c) Satisfiability
(d) All of the mentioned

133. From which rule does the modus ponens are derived?
(a) Inference rule
(b) Module rule
(c) Both a & b
(d) None of the mentioned

134. Solving a constraint satisfaction problem on a finite domain is an/a ______ problem with respect to the domain size.
(a) P complete
(b) NP complete
(c) NP hard
(d) Domain dependent

135. Which is not Familiar Connectives in First Order Logic?
(a) and (b) iff
(c) or (d) not

136. Inference algorithm is complete only if,
(a) It can derive any sentence
(b) It can derive any sentence that is an entailed version
(c) It is truth preserving
(d) Both b & c

137. Instead of representing knowledge in a relatively declarative, static way (as a bunch of things that are true), rule-based system represent knowledge in terms of______ that tell you what you should do or what you could conclude in different situations.
(a) Raw Text
(b) A bunch of rules
(c) Summarized Text
(d) Collection of various Texts

138. Forward chaining systems are ______, whereas backward chaining systems are ______.
(a) Goal-driven, goal-driven
(b) Goal-driven, data-driven
(c) Data-driven, goal-driven
(d) Data-driven, data-driven

139. A Horn clause is a clause with ______ positive literal.
(a) At least one (b) At most one
(c) None (d) All

140. ______ trees can be used to infer in Horn clause systems
(a) Min/Max Tree
(b) And/Or Trees
(c) Minimum Spanning Trees
(d) Binary Search Trees

141. Semantic Networks is
(a) A way of representing knowledge
(b) Data Structure
(c) Data Type
(d) None of the mentioned

142. Meronymy relation means,
(a) A is part of B
(b) B has A as a part of itself
(c) A is a kind of B
(d) A is superordinate of B

143. Hypernymy relation means,
(a) A is part of B
(b) B has A as a part of itself
(c) A is a kind of B
(d) A is superordinate of B

144. Hyponymy relation means,
(a) A is part of B
(b) B has A as a part of itself
(c) A is subordinate of B
(d) A is superordinate of B

145. Holonymy relation means,
(a) A is part of B
(b) B has A as a part of itself
(c) A is a kind of B
(d) A is superordinate of B

146. DEC advertises that it helped to create "the world's first expert system routinely used in an industrial environment," called XCON or:
(a) PDP-11 (b) RI
(c) VAX (d) MAGNOM

147. Prior to the invention of time-sharing, the prevalent method of computer access was:
(a) batch processing
(b) telecommunication
(c) remote access
(d) All of the mentioned

148. Seymour Papert of the MIT AI lab created a programming environment for children called:
(a) BASIC (b) LOGO
(c) MYCIN (d) FORTRAN

149. The Strategic Computing Program is a project of the:
(a) Defense Advanced Research Projects Agency
(b) National Science Foundation
(c) Jet Propulsion Laboratory
(d) All of the mentioned

150. The original LISP machines produced by both LMI and Symbolic were based on research performed at:
(a) CMU
(b) MIT
(c) Stanford University
(d) RAMD

151. In LISP, the addition 3 + 2 is entered as
(a) 3 + 2 (b) 3 add 2
(c) 3 + 2 = (d) (+ 3 2)

152. In LISP, the function returns t if is a CONS cell and nil otherwise:
(a) (cons) (b) (consp)
(c) (eq) (d) (cous =)

153. In a rule-based system, procedural domain knowledge is in the form of:
(a) production rules
(b) rule interpreters
(c) meta-rules
(d) control rules

154. Default reasoning is another type of
(a) Monotonic reasoning
(b) Analogical reasoning
(c) Bitonic reasoning
(d) Non-monotonic reasoning

155. Generality is the measure of
(a) Ease with which the method can be adapted to different domains of application
(b) The average time required to construct the target knowledge structures from some specified initial structures
(c) A learning system to function with unreliable feedback and with a variety of training examples
(d) The overall power of the system

156. Fuzzy logic is a form of
(a) Two-valued logic
(b) Crisp set logic
(c) Many-valued logic
(d) Binary set logic

157. The truth values of traditional set theory is ______ and that of fuzzy set is ______.
(a) Either 0 or 1, between 0 & 1
(b) Between 0 & 1, either 0 or 1
(c) Between 0 & 1, between 0 & 1
(d) Either 0 or 1, either 0 or 1

158. How many types of random variables are available?
(a) 1 (b) 2
(c) 3 (d) 4

159. What are the advantages of neural networks over conventional computers?
(i) They have the ability to learn by example
(ii) They are more fault tolerant
(iii) They are more suited for real time operation due to their high "computational' rates
(a) (i) and (ii) are true
(b) (i) and (iii) are true
(c) Only (i)
(d) All of the mentioned

160. Which of the following is true? Single layer associative neural networks do not have the ability to:
(i) perform pattern recognition
(ii) find the parity of a picture
(iii) determine whether two or more shapes in a picture are connected or not
(a) (ii) and (iii) are true
(b) (ii) is true
(c) All of the mentioned
(d) None of the mentioned

161. Which is true for neural networks?
(a) It has set of nodes and connections
(b) Each node computes its weighted input
(c) Node could be in excited state or non-excited state
(d) All of the mentioned

162. Neuro software is:
(a) A software used to analyze neurons
(b) It is powerful and easy neural network
(c) Designed to aid experts in real world
(d) It is software used by Neuro surgeon

163. What is the intentional exchange of information brought about by production and perception?
(a) Hearing
(b) Communication
(c) Speech
(d) None of the mentioned

164. What is the complex system of structured message?
(a) Languages (b) Words
(c) Signs (d) Speech

165. How many things are present in conventional communication signs?
(a) 3 b) 4
(c) 5 (d) 6

166. What is defined by set of strings?
(a) Signs
(b) Formal language
(c) Communication
(d) None of the mentioned

167. What is a finite set of rules that specifies a language?
(a) Signs (b) Communication
(c) Grammar (d) Phrase

168. What kind of perception is used in printing?
(a) Optical character recognition
(b) Speech recognition
(c) Perception
(d) None of the mentioned

169. Why the parsing is used?
(a) Interpretation
(b) Building a parse tree
(c) Recognition
(d) All of the mentioned

170. How many objects are available in closed classes?
(a) 1 (b) 2
(c) 3 (d) 4

171. How many states are present in parsing?
(a) 1 (b) 2
(c) 3 (d) 4

172. Pick out the correct option about the types of parsing
(a) Top-down and bottom-up parsing
(b) Interpretation and communication
(c) Roll-up and roll-down
(d) None of the mentioned

173. What is the name for information sent from robot sensors to robot controllers?
(a) temperature (b) pressure
(c) feedback (d) signal

174. Which of the following terms refers to the rotational motion of a robot arm?
(a) swivel (b) axle
(c) retrograde (d) roll

175. What is the name for the space inside which a robot unit operates?
(a) environment (b) spatial base
(c) danger zone (d) work envelop

176. Which of the following terms IS NOT one of the five basic parts of a robot?
(a) peripheral tools
(b) end effectors
(c) controller
(d) drive

177. Decision support programs are designed to help managers make:
(a) budget projections
(b) visual presentations
(c) business decisions
(d) vacation schedules

178. PROLOG is an AI programming language which solves problems with a form of symbolic logic known as predicate calculus. It was developed in 1972 at the University of Marseilles by a team of specialists. Can you name the person who headed this team?
(a) Alain Colmerauer
(b) Nicklaus Wirth
(c) Seymour Papert
(d) John McCarthy

179. The number of moveable joints in the base, the arm, and the end effectors of the robot determines ______?
(a) degrees of freedom
(b) payload capacity
(c) operational limits
(d) flexibility

180. Which of the following places would be LEAST likely to include operational robots?
(a) warehouse
(b) factory
(c) hospitals
(d) private homes

181. For a robot unit to be considered a functional industrial robot, typically, how many degrees of freedom would the robot have?
(a) three (b) four
(c) six (d) eight

182. Which of the basic parts of a robot unit would include the computer circuitry that could be programmed to determine what the robot would do?
(a) sensor (b) controller
(c) arm (d) end effector

183. What will take place as the agent observes its interactions with the world?
(a) Learning (b) Hearing
(c) Perceiving (d) Speech

184. How many things are concerned in design of a learning element?
(a) 1 (b) 2
(c) 3 (d) 4

185. What is used in determining the nature of the learning problem?
(a) Environment
(b) Feedback
(c) Problem
(d) All of the mentioned

186. How many types are available in machine learning?
(a) 1 (b) 2
(c) 3 (d) 4

187. Which is used for utility functions in game playing algorithm?
(a) Linear polynomial
(b) Weighted polynomial
(c) Polynomial
(d) Linear weighted polynomial

188. Which is used to choose among multiple consistent hypotheses?
(a) Razor
(b) Ockham razor
(c) Learning element
(d) None of the mentioned

189. What will happen if the hypothesis space contains the true function?
(a) Realizable
(b) Unrealizable
(c) Both a & b
(d) None of the mentioned

190. What takes input as an object described by a set of attributes?
(a) Tree
(b) Graph
(c) Decision graph
(d) Decision tree

191. How the decision tree reaches its decision?
(a) Single test
(b) Two test
(c) Sequence of test
(d) No test

192. Two basic types of rule based systems are,
1 ______
2 ______
(a) Forward chaining, backward chaining
(b) Reduction to propositional logic, Apply modus ponen
(c) Apply modus ponen, Manipulate rules directly
(d) Convert every rule to Horn Clause, Reduction to propositional logic

193. Which is also called single inference rule?
(a) Reference
(b) Resolution
(c) Reform
(d) None of the mentioned

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(d) All of the mentioned

195. First Order Logic is also known as,
(a) First Order Predicate Calculus
(b) Quantification Theory
(c) Lower Order Calculus
(d) All of the mentioned above

196. The adjective "first-order" distinguishes first-order logic from ______ in which there are predicates having predicates or functions as arguments, or in which one or both of predicate quantifiers or function quantifiers are permitted.
(a) Representational Verification
(b) Representational Adequacy
(c) Higher Order Logic
(d) Inferential Efficiency

197. ______ algorithm keeps track of k states rather than just one.
(a) Hill-Climbing search
(b) Local Beam search
(c) Stochastic hill-climbing search
(d) Random restart hill-climbing search

198. ______ are mathematical problems defined as a set of objects whose state must satisfy a number of constraints or limitations.
(a) Constraints Satisfaction Problems
(b) Uninformed Search Problems
(c) Local Search Problems
(d) Only (a) and b)

199. The term ______ is used for a depth-first search that chooses values for one variable at a time and returns when a variable has no legal values left to assign.
(a) Forward search
(b) Backtrack search
(c) Hill algorithm
(d) Reverse-Down-Hill search

200. Consider a problem of preparing a schedule for a class of student. This problem is a type of
(a) Search Problem
(b) Backtrack Problem
(c) CSP
(d) Planning Problem

Answers

1. a	2. b	3. c	4. d	5. d	6. a	7. a	8. a	9. b
10. d	11. b	12. a	13. c	14. a	15. b	16. d	17. a	18. a
19. c	20. d	21. a	22. d	23. d	24. c	25. b	26. b	27. a
28. c	29. c	30. b	31. c	32. d	33. a	34. d	35. a	36. c
37. b	38. c	39. b	40. d	41. a	42. c	43. d	44. a	45. a
46. a	47. d	48. d	49. b	50. b	51. b	52. a	53. b	54. c
55. a	56. a	57. a	58. b	59. d	60. b	61. a	62. c	63. d
64. b	65. c	66. b	67. b	68. a	69. d	70. d	71. b	72. a
73. b	74. a	75. c	76. b	77. d	78. c	79. d	80. c	81. a
82. c	83. c	84. b	85. d	86. c	87. a	88. b	89. a	90. c
91. c	92. a	93. c	94. c	95. d	96. b	97. d	98. a	99. c
100. b	101. d	102. b	103. c	104. a	105. c	106. a	107. b	108. c
109. b	110. d	111. a	112. d	113. a	114. b	115. a	116. b	117. b
118. a	119. c	120. c	121. a	122. d	123. d	124 d	125. a	126. b
127. a	128. d	129. c	130. d	131. d	132. d	133. a	134. b	135. d
136. d	137. b	138. c	139. b	140. b	141. a	142. a	143. d	144. c
145. b	146. b	147. a	148. b	149. a	150. b	151. b	152. b	153. a
154. d	155. a	156. c	157. a	158. c	159. d	160. a	161. d	162. b
163. b	164. a	165. c	166. b	167. c	168. a	169. b	170. d	171. c
172. a	173. c	174. d	175. d	176. c	177. a	178. a	179. d	180. c
181. b	182. b	183. a	184. c	185. b	186. c	187. d	188. b	189. b
190. d	191. c	192. a	193. b	194. a	195. d	196. c	197. b	198. a
199. b	200. c							

Computer Graphics

1. By generating ______, a dashed line could be displayed.
(a) Inter dash spacing
(b) Very short dashes
(c) Botha a and b
(d) A or B

2. ______ is called pixel mask
(a) A string containing only 1;s
(b) A string containing only 0's
(c) A string containing 1 and 0
(d) A string containing 0 and 0

3. Thick curves is displayed by the another method called ______.
(a) Curve slope (b) Curve width
(c) Curve cap (d) Only c

4. The algorithm which displays line-type attributes by plotting pixel spans is
(a) Raster line algorithm
(b) Raster scan algorithm
(c) Random line algorithm
(d) Random scan algorithm

5. The basic attributes of a straight line segment are
(a) Type (b) Width
(c) Color (d) All of these

6. A heavy line on a video monitor could be displayed as
(a) Adjacent perpendicular lines
(b) Adjacent parallel lines
(c) Both a and b
(d) Neither a nor b

7 To set the line-width attribute the following command is used.
(a) SETLINEWIDTHSCALEFACTOR (lw)
(b) Setlinewidth()
(c) Setlinewidthscalefacto (lw)
(d) setLineWidthScaleFactor (lw)

8. The parameter to "set Line Width Scale Factor (lw) "function specifies?
(a) Standard width
(b) Relative width of the line
(c) Thickness of the line
(d) All the above

9. We can adjust the shape of the line ends to give them a better appearance by using
(a) Line spacing (b) More dots
(c) Line caps (d) Round cap

10. - Thick line drawn with
(a) Butt caps
(b) Round caps
(c) Projecting square caps
(d) All of the mentioned

11. We set the line-color value in PHIGS with the function
(a) set Polyline Color Index (lc)
(b) setline Color ()
(c) SETPOLYLINECOLORINDEX (lc)
(d) Only b

12. The pixel masks for implementing line-type options are also used in the following algorithm to generate dashed and dotted patterns.
(a) Raster line algorithm
(b) Raster scan algorithm
(c) Raster curve algorithm
(d) Random curve algorithm

13. We can generate the dashes in the various octants and the circle path with vertical path using
(a) Circles
(b) Circle symmetry
(c) Circle symmetry
(d) Curve slope

14. The function of the pixel mask is
(a) To display dashes and inter dash spaces according to the slope
(b) To display curved attributes
(c) To display the thick curves
(d) None of these

15. If we want to display constant-length dashes, then we need to do the following.
(a) We need to adjust the number of pixels plotted in each dash
(b) We need to adjust the number of dots
(c) We must use line-type functions
(d) Neither a nor c

16. The curves displayed with a rectangular pen will be
(a) Thinner
(b) Thicker and magnitude slope is 1
(c) Thicker and magnitude slope >1
(d) B or C

17. Which of the following is the basic attribute of a character?
(a) Font (b) Size and color
(c) Orientation (d) All the above

18. Attribute can be set for
(a) Entire character strings
(b) Individual characters defined as marker symbol
(c) Neither a nor b
(d) Both a and b

19 When a character string is to be displayed, the which color is used to set the pixel value in frame buffer?
(a) White color (b) Current color
(c) Black color (d) Any color

20. The Character size is specified by
(a) Printers (b) Compqsitors
(c) Frame buffer (d) Both a and b

21. The distance between the bottom-line and the top-line of the character body is
(a) Same for all character
(b) Different for all character
(c) Same for some character
(d) Different for some character

22. ______ is a single character that can be displayed in different colors and in different sizes.
(a) String (b) Marker symbol
(c) Only a (d) Symbols

23. A function that allows the user to select a particular character to be as marker symbol is
(a) setmarkertype (mt)
(b) setMarkersymbol(mt)
(c) setMarkerType (mt)
(d) SETMARKER ( )

24. The orientation for a displayed character string is set according to, which of the following function?
(a) Setcharacterupvector()
(b) setcharacterUpvector(upvect)
(c) setCharacterUpVector(upvec)
(d) only b

25. A basic fill style is selected in a PHIGS program with the function
(a) setInteriorStyle (fs)
(b) setStyle (fs)
(c) SetfillStyle (fs)
(d) setInteriorStyleIndex (fs)

26. Which one is not a type of basic fill styles?
(a) Hollow (b) solid color
(c) Pattern (d) Dark

27. The process of filling an area with rectangular pattern is called
(a) Tiling (b) Linear fill
(c) Tint-fill (d) Soft-fill

28. The algorithm which repaints an area that was originally painted by merging a foreground color F and background color B where F!=B.
(a) Tint fill (b) Flood fill
(c) Linear soft-fill (d) Boundary fill

29. The fill color that is combined with the background color is known as
(a) Soft fill (b) Tint fill
(c) Both a and b (d) None

30. Hatch fill procedures are implemented to draw
(a) Single hatching
(b) Cross hatching
(c) Either a or b
(d) Only b

31. The operator that is used for combining a fill pattern with a background pattern is
(a) AND operator (b) OR operator
(c) X-OR operator(d) All of these

32. Hollow areas are displayed using only the
(a) Boundary outline
(b) Line-drawing routine
(c) Hatched patterns
(d) Closed poly line

33. Options for filling a defined region include a choice between ______.
(a) Solid color or a pattern fill
(b) Choices for particular colors and pattern
(c) Both a and b
(d) None

34. For lines with slope magnitude |m|<1, ?x can be______.
(a) A set corresponding vertical deflection
(b) A set proportional to a small horizontal deflection voltage
(c) Only a
(d) All of these

35. On raster system, lines are plotted with
(a) Lines (b) Dots
(c) Pixels (d) None

36. Expansion of line DDA algorithm is
(a) Digital difference analyzer
(b) Direct differential analyzer
(c) Digital differential analyzer
(d) Data differential analyzer

37. Which algorithm is a faster method for calculating pixel positions?
(a) Bresenham's line algorithm
(b) Parallel line algorithm
(c) Mid-point algorithm
(d) DDA line algorithm

38. The disadvantage of lineDDA is
(a) Time consuming
(b) Faster
(c) Neither a nor b
(d) None

39. An accurate and efficient raster line-generating algorithm is
(a) DDA algorithm
(b) Mid-point algorithm
(c) Parallel line algorithm
(d) Bresenham's line algorithm

40. The algorithm which uses multiple processors to calculate pixel positions is
(a) Midpoint algorithm
(b) Parallel line algorithm
(c) Bresenham's line algorithm
(d) All the above

41. Coordinate references in the polyline function are stated as
(a) Relative coordinate values
(b) Absolute coordinate values
(c) Current position
(d) Real coordinate values

42. ______ is defined as set of points such that the sum of the distances is same for all points.
(a) Ellipses (b) Lines
(c) Circles (d) Only a

43. If the boundary is specified in a single color, and if the algorithm proceeds pixel by pixel until the boundary color is encountered is called
(a) Scan-line fill algorithm
(b) Boundary-fill algorithm
(c) Flood-fill algorithm
(d) Parallel curve algorithm

44. If the angle between 2 connected line segments is very small then ______ can generate a long spike that distorts the appearance of the polyline.
(a) Miter join (b) Round join
(c) Bevel join (d) None

45. A line drawn in the background color is
(a) Visible
(b) Invisible
(c) Visible or Invisible
(d) Only b

46. The basic parameter to curved attributes are
(a) Type (b) Width
(c) Color (d) All of these

47. Raster curves of various widths can be displayed using
(a) Horizontal or vertical spans
(b) Horizontal spans
(c) Vertical spans
(d) Horizontal and vertical spans

48. If the magnitude of the curve slope is lesser than 1, then
(a) We can plot horizontal spans
(b) We can plot vertical spans
(c) Only b
(d) All of these

49. If the slope magnitude is 1, then circles, ellipse and other curves will appear
(a) Thick (b) Thinnest
(c) Big (d) Rough

50. Which of the following is not a line-type?
(a) Dashed line (b) Dark line
(c) Dotted line (d) Only b

Answers

1 a	2. c	3. a	4. a	5. d	6. b	7. d	8. b	9. c
10. d	11. a	12. c	13. b	14. a	15. a	16. b	17. d	18. d
19. b	20. d	21. a	22. b	23. c	24. c	25. a	26. d	27. a
28. c	29. c	30. c	31. d	32. a	33. c	34. b	35. c	36. c
37. d	38. a	39. d	40. b	41. b	42. d	43. b	44. a	45. d
46. d	47. a	48. c	49. b	50. d				